MONEY:

ITS CONNEXION WITH RISING AND FALLING PRICES

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PREFACE TO THE SIXTH EDITION

The first edition of this book was written in August and September, 1918, before I knew that the war was at last coming to an end, and it was published soon after the Armistice

In this country the evil of over-issue of currency had not progressed nearly so far as in several others, and in the light of the subsequent experience of Russia, Germany, and Poland the British note issue of that time looks quite trifling, converted into marks at the pre-war rate of twenty to the pound the whole amount outstanding was then only a trifling fraction of the number of marks which were added each day to the German currency in the autumn of 1923 But in the eye of the prophet a little cloud no bigger than a man's hand may be the herald of a storm, and the situation was made specially alarming by the amazing delusions which prevailed even in most "expert" quarters about the paper pounds which, though the supersession of gold coin had long ago been practically completed, had been paid out by the Treasury during the previous twelve months at an average rate of over a quarter of a million pounds a day, including Sundays Government apologists, among whom were not only officials,

but many journalists and even a few economists, actually contended that the Currency Note issue, made under a purely permissive Act of Parliament, was uncontrollable by any authority or human being, or at the least that it could not be checked without making the Bank of England bankrupt. "People constantly speak," said one of them, "as though the issue of currency notes were somehow within the power of the Treasury to regulate. But surely this is not so. Anyone who has a balance at the Bank of England can turn it into currency notes *ad lib* How is he to be stopped?" The Bank was supposed to have an incurable diarrhoea of pounds, though she had never suffered from that disease before the laxative of the Currency and Bank Notes Act, 1914, was administered to her.

The House of Commons Select Committee on National Expenditure, after hearing the Treasury on the subject, declared in its Second Report, "Notes are not issued in order to make Government payments," without making the slightest attempt to explain how the Government managed to get rid of the proceeds of the issue without paying them away.

All this made me think it desirable to add to my *Wealth* a chapter containing the elementary principles on which the value or purchasing power of money depends, but the exposition turned out longer than I expected, so that it seemed better to publish it separately. This, unaltered except for a few unimportant corrections and some excisions or amendments of allusions to states of things no longer existing, forms Part I of the present edition.

Part II, sections 1–4, and Part III, sections 1 and 2, were added in the fourth edition, 1923, taking the place of two sections dealing with the rise of prices in 1914–20 which had appeared in the second and third editions. Much of sections 1 and 2 of Part II were taken, by kind permission of the editors, from a paper read to the Economic Section of the British Association at Edinburgh, which was printed in the *Economic Journal* for December, 1921.

Section 5 of Part II, section 3 of Part III, and the two Appendices, were added in the fifth edition, 1926.

In the present edition I have continued Appendix II, explaining the changes which have been made in the gold standard, so as to make it cover the effect of the Currency and Bank Notes Act, 1928, which, ten years and eleven days after the Armistice of November 11, 1918, put an end to the Currency Note Issue hastily conceived as an emergency currency in the hectic days of August, 1914.

January, 1929.

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PART I
GENERAL PRINCIPLES

§ 1 *Introduction.*

Many economic principles can be dealt with best in the first place on the assumption that when a change is observed in the price of a particular commodity or service it means a change of value peculiar to that one kind of commodity or service, and is not merely a part of a general change in the level of prices, which is only another name for a change in the value of money. In civilized countries in ordinary times, as in England for nearly a century before the War broke out in 1914, general changes in prices—rises or falls of prices taken as a whole—were perceptible enough to experts and students, but were too gradual to be realised by the mass of the people, or even to exercise any easily recognized influence on the actions of the commercial and investing classes. In 1913 the author of *Wealth: a Brief Explanation of the Causes of Material Welfare*, might well feel himself justified in omitting the subject. But after the war the position is different, that brought about a change in the general level of prices or value of money so great and so rapid that it is perceptible to everyone, and has immensely disturbed the relative material welfare of classes and individuals and become an acknowledged cause of action in numerous directions.

To endeavour to acquire some clear notion of what

makes the value of money change has become the duty of all who think themselves capable of expressing useful opinions on economic affairs The following pages embody an attempt to assist in this task They do not profess to be exhaustive investigation of the past and discussion of schemes for the future have both been sacrificed in order that space might be gained for treatment of the present.

§ 2. *Recognition and measurement of changes in the value of money*

A great many attempts have been made to define money in few words. They have failed like similar attempts to define other economic terms commonly used in ordinary language They fail because money, like most of the other great economic terms, and like nearly all words in common use, means different things in different contexts. In a context like the present, which suggests an investigation into the causes of rising and falling prices, it means the unit of account commonly used in purchases and sales and other commercial transactions. In the United Kingdom, Australia and South Africa people buy goods with and sell them for pounds, shillings and pence, and "prices" are always expressed in quantities of these units: in the United States and Canada dollars and cents are used for the purpose in France, francs and centimes: in India rupees, annas and pice But as the cent and centime are merely decimal fractions of the dollar and franc, and the shilling and penny merely vulgar fractions of the pound, and annas and pice the same of the rupee, we can say for short and without any risk of being misunderstood, that the unit of account in these countries is the pound, the dollar, the franc, and the rupee When, then, it is said in England that the value of money has fallen, what is meant is that

a pound sterling, £1, will buy less than before: when the same words are used in the United States what is meant is that a dollar, $1, will buy less, when in France, that a franc, 1f., and in India, that a rupee, R1, will buy less Thus an alteration in the general level of prices is the same thing as an alteration in the value of money, except of course that it is upsidedown, a fall in the value of money being a rise in the general level of prices, and a rise in its value being a fall in that level As prices are expressed in quantities of the unit of account, this is a matter which could not possibly be otherwise The price of things is the money got for them, the value of money is the things got for it.

Till recently there have been many persons, and perhaps there still are some, who manifest an extraordinary reluctance to admit the occurrence of any change in the general level of prices in their own time They appear to have at the back of their minds an impression that money has become invariable in value, so that prices taken as a whole are no longer subject to change, however much variation there may be in the prices of particular commodities. Why such changes should have been possible in the past, as they admit, and not in the present, they are never able to explain, and their reluctance to admit the possibility of changes in the present is only the consequence of their being so habitually accustomed to measure values by money that they feel towards any suggestion that the value of money itself wants measuring just as the aged villager feels towards the suggestion that the distance between two milestones from which he has throughout life taken his idea of a mile is fifty yards short, and the suggestion that the value of money has changed appears as incredible to them as the suggestion that the whole of the West Riding of Yorkshire had risen a foot between

two Ordnance Surveys would appear to the average inhabitant of Huddersfield

Being unable to bring forward any reasons why changes in the value of money and general level of prices should have become impossible, those who dislike the idea are obliged to confine themselves to questioning the existence of each particular change which happens to take place in their time. It is therefore necessary for us to begin by making clear how such changes may be recognized and roughly measured. We cannot expect to find in actual life a general rise of prices manifesting itself as a uniform rise, say of 10 per cent. in the price of each single commodity and service. If we did expect such a thing, it would imply that we also thought that if the general level of prices remained stationary, say between to-day and next year, the price of each single commodity would be precisely the same next year as to-day Of course we expect nothing of the kind: we know that particular prices are affected by various diverse influences and are constantly changing. In the event of a general rise or fall of prices there is no reason for supposing that these influences would be any more quiescent than when no such change was proceeding When there is a general rise, some things will rise much and others little, and some are likely even to fall How then can we judge whether there has been a change in the general level, and if we are satisfied that such a change has occurred, how can we judge whether it is great or small?

The process is analogous to that which would be employed in ascertaining whether and if so by how much the existing level of an acre of ground which has been very much disturbed by operations upon it is lower than it was before Let us say that Jones and Smith have been comrades in the War, and on

the conclusion of peace they return home to find that a field belonging to Smith has been used for training recruits in trench warfare Formerly it was flat and level with the surrounding fields, now the digging and mining have made it into something like a model of Switzerland Smith is informed by a friend (who does not want his name mentioned) and believes, that Jones' father, the only hauler in the village, has taken advantage of its disturbed condition to carry away many loads of gravel from it. He tells this to Jones, who replies indignantly "Father would never do a thing like that," and points out that if so much gravel had been removed, the general level of the ground would have been perceptibly reduced Smith and Jones go together to look at the ground, and to Smith's eye the field seems on the whole very decidedly lower—"about two feet," he guesses. Jones is led by bias in favour of Jones senior to think there is no difference, and draws Smith's attention to the particularly high parts of the ground: Smith in return points to the biggest depressions To settle the question, they agree to run a level line of rods across the field sufficiently high to clear the hills and measure down from it at frequent fixed intervals, say every two yards, to the present surface This done, they find that the average of all the measurements indicates a level of 10 inches below the old level This is a blow to Jones, but not so much as Smith expected, so the two agree that this result "is not sufficient to go by," and take another line across the field, this shows an average fall of 8 inches, and averaged with the first line, 9 inches Both being still dissatisfied, they take four more lines which give as their results falls of 11, 9, 12 and 8 inches. The average for the whole of the measurements is now $9\frac{2}{3}$, and both Smith and Jones see that more measurements will make very little difference. Smith is willing to admit that the

fall need not be more than about 10 inches, and Jones finds it expedient to abandon the argument that nothing has been removed, and to find some other defence for his parent.

Commodities and services are so numerous in kind and the kinds shade into each other so gradually, that to take into account the price of all of them is much like taking into account the level of every part of a rough field, when smoothing it is not to be thought of. We cannot do it literally, and must be content with taking a sufficient number of measurements at points selected without bias. The ordinary person's impression about a general change of prices is much like Smith's measurement of the level of his field "by the eye"; it is likely that he will be able to recognize a large change of prices—probably anything over 25 per cent., just as Smith is likely to be able to detect a fall of 10 feet in the general level of his field. When the change is not great, he is just as likely as Jones to be misled by bias into denying its existence, and in all cases bias is likely to mislead him, as it led Smith, into very faulty estimates. To arrive at agreement it is necessary, as in the case of the disturbed field, to introduce statistical methods, and this is done by the construction of what are called "index numbers" of prices. The prices of a large number of commodities at some particular date, called for this purpose the "base year" or the "standard year," are collected, and the prices of the same commodities at subsequent (or earlier) dates are represented as percentages of the prices of the base year. If beef cost 10*d.* per lb. in the base year and 13*d.* at some later date, it is put down at 100 for the first and 130 for the second period, since if it takes 13*d* to buy what formerly could be got for 10*d.*, it takes 130*d.* to buy what could formerly be got for 100. The prices of a

number of other commodities are treated in the same way, so that each stands at 100 for the base year and some other number, larger or smaller than 100 according as its price has risen or fallen, for the period to be compared with the base-year Then, as each of the commodities stands at 100 for the base-year, the average or "index-number" for that year will be 100, while the index number for the other date will be the average of a number of figures each of which may be above or below 100 When this index-number is above 100, the excess will indicate a rise of that much per cent in the general level of prices, and when it is below the deficit will indicate a fall of that much. Thus in what is known as Sauerbeck's index number, in which the base or standard period is the years 1867–77 averaged, the index number for 1896 is 61 per cent. of the 1867–77 average, that for each of the years 1912 to 1914 is 85 Then there was an annual rise till 1920, for which the figure was 251 An abrupt fall to 155 follows for 1921, since when the figures have been 131, 129, 139, 136, 126 and 122. (The figures for each year are the average of twelve end-of-month records, e g the 251 for 1920 is made up of figures rising from 245 in January to 266 in April and falling to 207 in December.) There are many difficulties in the construction of an index number, the chief being that of finding commodities which do not vary much in kind or quality, and have prices about which dispute is impossible, but none of the difficulties are sufficient to prevent the method from making it possible to prove any substantial change in the general level of prices and to measure approximately its magnitude [1]

Granting that changes in the general level of prices

[1] For the discussion of the principles of index numbers, see A. L. Bowley, *Elements of Statistics*

or value of money can and do occur, and that we can appreciate their existence and approximately measure their magnitude, we can proceed to consider their causes In other words we can ask why is it that a unit of account such as the pound sterling or the rupee is of greater value—will buy more—at one time than at another? The subject, or so much of it as is of immediate modern interest, may be divided according as the unit of account is a mere quantity of bullion, a coin kept by limitation at a value above that of its bullion contents, or, finally, a note.

§ 3. *The value of money or general level of prices where the unit of account is a fixed quantity of bullion, uncoined or coined.*

The unit of account has often and for long periods been nothing but a quantity—which has almost always if not always meant a weight—of a particular metal The English "pound," still indicated by the initial letter of the Roman *libra*, being the name of a weight as well as a unit of account, serves to remind us of that time The introduction of coinage makes it possible to count the amount of metal, "reckon it by tale," instead of weighing it with scales every time it passes from hand to hand, which is a great improvement, but it need not make, and sometimes has not made, any material difference to the value of the unit, a mint may coin all the bullion which any one chooses to bring to it and give it back to him free of any deduction or charge, while at the same time the law allows any one to do what he likes with the coin—to export it from the country in which it is or to melt it down at home for any purpose whatever In this case a pound weight of bullion is freely convertible into a pound weight of coin and a pound weight of coin is freely convertible into a pound of bullion, and the two must therefore be of

equal value: if the coin were worth more than an equal weight of uncoined metal, people would be carrying the uncoined to the Mint: if coin were worth less than uncoined, they would be melting the coin down. The fact that the uncoined metal and the coined continue to exist side by side is proof of their being, weight for weight, of equal value. We are not to say that the value of the coin is determined by that of the uncoined metal any more than we are to say that the value of the uncoined metal is determined by that of the coin, but we can say unhesitatingly that the two are connected together and must stand at the same level just as much as the water in two cisterns connected by a large pipe.

This was the situation, for example, in England from soon after the end of the Napoleonic war till 1914, the unit of account called the "pound," originally a pound weight of silver, had through various vicissitudes come to be represented by a gold coin called a sovereign made out of 113 grains of pure gold and 10½ of negligible alloy, coinage was free and gratuitous, and coins could be melted or transported anywhere at the will of the owner. What, by an historical survival, was called "a pound" might have been translated into 113 grains of fine gold in every contract and commercial transaction without producing any sort of dislocation or causing any one to lose or gain. It is true that people constantly paid each other "pounds" without passing either shapeless lumps of gold or sovereigns from hand to hand: they paid in bank-notes and they paid in cheques, but any one who got a five-pound banknote (no smaller notes were allowed in England and Wales) could if he pleased demand five sovereigns for it from the bank that issued it, and any one who received a good cheque could demand payment of its amount either in sovereigns or in Bank of

England notes which could be "converted into" sovereigns by demand on the Bank So that any one paying or receiving "pounds" was always giving or getting something equivalent to 113 grains of gold. Thus the value of the pound was identical with the value of gold—what a pound would "buy" was just the same as what 113 grains of gold would exchange for.

So the value or purchasing power of English money —of the pound sterling—could be, and generally was, quite properly discussed as the value of gold An answer to the question what made gold exchange for more of other commodities on the whole was an answer to the question what made the pound exchange for or "buy" more of other commodities on the whole.

The value of a precious metal is dependent on just the same things as the value of any other metal If more people demand it (that is want it and have means to pay for it), or if the same number of persons demand more, it will rise in value, and vice versa. If more persons are willing and able to produce it, or if the persons already engaged in its production are able and willing to produce more of it, its value will tend to fall.

No one will find much difficulty in appreciating this so far as the demand for purposes other than currency are concerned Any one can see that gold is a metal which is prized for purposes of ornament, which is extraordinarily convenient for hoarding as a store of treasure to be expended at a future date, and which is at present very useful for many industrial purposes and would be gladly used for many more if only it were cheaper. About the changes of demand in relation to all these there is so little difficulty that they are often ignored. But they are far too important for that, as is suggested by the fact that they are

estimated in ordinary times to take somewhere in the neighbourhood of a half of the annual product of the metal We must always remember that the demand tends to increase as people become richer and more numerous, that it tends to decrease as security grows and the habit of keeping hidden hoards decays, and that it varies with industrial discovery, as for example, the invention of gold plates in dentistry, which increased the demand, and the invention of vulcanite plates, which diminished it Further we must note that for many industrial uses the demand is extraordinarily elastic, since if gold were cheaper its use would be extended enormously—if it were cheap enough an enormous number of poor people who now have no gold ornaments would have some, and if it were cheaper still it would be largely used for roofing houses

The demand for gold for purposes of currency is more difficult to deal with, owing to our being accustomed to think of demanding other things in exchange for currency rather than of demanding currency in exchange for other things, and also, perhaps, owing to our habit of taking examples of demand in connexion with commodities quickly consumed, like wheat, rather than commodities which only perish slowly, like houses If we can shake ourselves loose from the effect of these habits, we shall soon find the subject less anomalous than it is often supposed to be.

The amount of metallic money in existence at any one moment of time is the sum of the amounts in the possession of individuals and institutions at that moment It cannot grow larger without an increase either in the number of individuals and institutions who have holdings or an increase in the average magnitude of the single holding. Other things being equal, therefore, an increase in the numbers of persons and institutions with separate holdings will

increase the aggregate demand for coin in just the same way as, other things being equal, an increase in the number of persons with separate houses will increase the demand for houses Such an increase may of course be brought about by an increase of population if the additional numbers do not consist entirely of very small children, very infirm or aged persons, paupers and others who have no separate holdings of coin. That qualification suggests that an increase may also be brought about by increasing the proportion of the people having separate holdings and by increasing the number of institutions with separate holdings for example, when a number of old people were taken out of the workhouses and given money upon which to maintain themselves, a large number of new holdings were created, each old-age pensioner now having his little stock: and when a new company for supplying anything is established, a fresh separate holding of coin is almost always set up. This part of the subject presents no difficulty.

Given the number of separate holdings, the aggregate amount of coin will depend on the magnitude of the average separate holding. The foundation of a person's or an institution's want of such a holding of coin is easy to see it is the necessity or convenience of having means of payment at hand The prudent shopkeeper takes care not to leave his till wholly without coin, because he fears a customer may walk out in a huff if he has to say he has "no change", the prudent housewife must have enough coin all through Sunday (when she may be spending nothing beyond 1*d*. or 3*d* to the church collection) to pay for last week's washing when the cart calls for this week's early on Monday, the prudent citizen does not literally invest his last penny in War-bonds as requested by the War-Savings Committee, because

he wants the services of the bus or tram on the way home

Before the introduction of paper currencies and methods of setting one payment against another provided by such machinery as bills of exchange and banks, the magnitude of the want for these stocks of coin must have depended largely on the amounts of money which the holder had to spend in the year and on the length of the periods for which payments such as rent and wages were made A rich landlord with a large rent roll would be likely to have a bigger amount of coin in his possession at any time than the landlord with a small rent-roll The richer man would receive £500 each quarter day, and gradually use that sum up till the next quarter came round the poorer would do the same with the £100 he received at the quarter, and so would always have only about one-fifth as much in hand as the other. The farmer who paid £25 a quarter would be likely to have much less coin in hand for some time before quarter day than a neighbour who paid £100 So, too, any manufacturer who had large sums to pay in wages at fortnightly intervals would have to hold for at least a considerable part of the fortnight more coin than his neighbour who had only a small wages bill to provide for And supposing a custom came in of paying rents only twice a year instead of four times, both the landlord and the farmer would have to keep more coin by them on the average, and if weekly wages became the custom in place of fortnightly, both employers and workmen would have to keep less by them on the average, as their stocks would be replenished more frequently Further, if money became less valuable, so that more must be paid as the rent of any particular farm or the wages of any particular man, larger stocks of coin would be kept.

Nowadays the situation is very different. Methods of setting one payment against another through banking and other agencies have done away with the necessity of a tenant holding an amount of coin in preparation for paying his rent and gradually increasing it as quarter day draws nearer, and also with the necessity of landlords holding a large amount of coin after quarter day and letting it down only gradually during the quarter. The rent is paid by a bank writing certain figures in its books which enable the landlord instead of the tenant to draw out the sum: the bank does not keep one stock of coin for the tenant and another for the landlord; both stocks are dispensed with. Even when there were no £1 and 10s. notes, the firm that had to pay £1,000 in wages did not in modern times have to accumulate £1,000 gradually throughout the week before pay day, but simply sent a clerk to the bank for the money an hour or two before it was paid out

Paper currencies containing notes of small denomination have obviously relieved every one except banks and governments of the necessity of holding coin unless in preparation for paying sums under the amount of the smallest note Coin is only wanted as "the change" of a note When there are ten-shilling notes in circulation, the private person however rich does not want more than about 7s in coin, and a poor person, unless he is very poor indeed, will have just as much. Firms which have to pay large sums in wages do not want any coin to pay those men who receive multiples of 10s They only want coin to pay the surpluses over multiples of 10s The consequence is that, when the amounts held by governments and banks are left out of account, the magnitude of the average holding of coin depends almost entirely on the magnitude of the smallest note which is allowed by law and is generally acceptable If £5

is the lowest note, a great deal of coin will be required, if £1 or 10s much less, and if a dollar, still less Increases of income will make no difference except in so far as they go to the very poorest class · longer or shorter intervals between periodical payments will only make this difference, that "change" is less likely to be required in payments made at longer intervals, since salaries, rents and other payments are more likely to be for multiples of the smallest note when they are paid at long intervals than when paid at short ones. Diminution in the value of money (higher prices) will not greatly tend to increase the want for coin, since it is not in the least likely to cause a withdrawal of the smallest note from circulation, and when prices are higher, more things will be in the region where purchases are made by notes. given that ten-shilling notes are in circulation, and are to continue in circulation, doubling prices will not make people want many more half-crowns or other silver coins and will make them want fewer halfpennies.

How much coin will be held by the governments which issue paper currency and by banks, whether they issue bank-notes or not, actually depends at present not so much on what would be thought necessary or desirable by a dispassionate and well-informed observer who could feel confidence that his opinion would be accepted by all, as on the decision arrived at by government and banking authorities, who often accept wholly erroneous theories, and who have to be guided to a large extent by the erroneous theories held by the public even when they do not accept them So we find in different countries very different amounts of coin held "in reserve" against liabilities which seem on the face of them very much the same, and very great changes in quite short periods. In practice therefore in modern times,

any considerable and rapid change in the currency part of the want for the precious metals, especially gold, comes from change in the policy of governments. At one moment a government will accumulate enormous sums in gold to impress its subjects or its enemies with an appearance of solvency, and a few years after it will spend the whole For a century a government will prohibit the issue of notes under £5 and prescribe that gold must be kept against all notes issued above a total of £20,000,000 or so, and then will itself issue £1 and 10s. notes and multiply the issue by six without increasing the reserve at all.

Some find a great difficulty at this point They say they can appreciate in the abstract the argument that increased want for coin and for the metal of which the coin is composed must tend to raise the value of both the coin and the uncoined metal, but that they cannot see how the result comes about. If more gold is wanted for dental plates, it seems reasonable to expect that more will have to be paid for it, but then it is paid for in gold sovereigns, and cannot be worth more than before in them, for the two are the same thing, so, too, if more coin is wanted it is all very well to expect it to rise in value, but how can it, seeing that you only give other money for it, which money is equivalent to it?

The answer is that we do not in fact buy gold with gold, or coin with coin or even with money We obtain the gold or coin we want by giving *other* commodities or services in exchange for them. If I, a private person, wish to increase my average holding of coin from £5 to £10, I cannot do it without somehow or other sacrificing, giving up, not money but other goods or services I must work harder and earn more, or I must reduce my expenditure, or I must reduce my savings and consequently have

less goods of some sort or other. If I give £5 for the gold in a dental plate and a gold watch and chain, just in the same way I must give up some commodities or services for the £5, so that I am really exchanging these for the plate and watch and chain [1] So even more obviously of any large aggregate of persons If the people of India individually or the Government of India decide that they will keep a larger stock of gold or silver, they must obtain it by giving goods or services in exchange for it, as they have been doing for centuries

If this is not found sufficiently convincing let us think of the converse case, in which a person sells his gold ornaments or reduces his stock of coin. Does he not then increase the demand for commodities other than gold as compared with the demand for gold? During a coal shortage I sold some gold ornaments, and immediately expended the money proceeds in the purchase of wood for fuel Must not this have tended to make the demand for gold less and the demand for wood greater than if I had continued to keep the ornaments in a drawer and gone without a fire? So, too, if I had arranged by good management to reduce my stock of coin by £1, could I not have spent that £1 on something that I wanted, and would not this have tended to diminish the value of gold and increase the demand for the thing that I bought and therefore for things other than gold? To buy gold with gold would be as futile as to buy wheat with wheat, whenever we get gold by giving something else for it we tend to increase the demand for it, and consequently to increase its value. whenever we give gold for something else

[1] I have thought it best not to encumber the text with the suggestion that I may get the coin simply by reducing my balance at the bank If I do this it means simply that I drive a harder bargain with the bank and the banker instead of me has to sacrifice something

we tend to diminish the demand for it and consequently to reduce its value. For the most part every week or month or year we give as much as we get, and the temporary ups and downs of our stocks cancel each other quickly; but when we increase our holding for good or diminish it for good we exercise a permanent influence.

The exposition so far given may seem to leave no place for the theory of value being connected with marginal utility, as taught in the economic text-books in regard to ordinary commodities But marginal utility plays just the same part with regard to gold (both for ordinary purposes and for currency) as it does with other commodities. The lower the value of gold, the lower will be the uses to which it will be put, and the poorer will be the classes of people who are able to use it; as has been suggested above, if gold were cheap enough, it would be used for roofs, and many people who do not have things which are now made of gold because they cannot afford them would have them. This is really easy enough to understand, but it may be a little difficult to see how the marginal utility theory applies to currency. Can we say that the value of sovereigns falls as they become more plentiful and their marginal utility diminishes? Where is the marginal purchaser or the marginal purchase? Where the elasticity of demand? The answer is that the difficulty we feel is only the result of the strangeness of estimating the value of sovereigns in other things instead of, as usual, the value of other things in sovereigns The marginal purchaser is the man who is only just convinced, or in practice in modern times the bank or Government which is only just convinced, of the desirability of increasing or diminishing the stock of coin in hand, just as the marginal purchaser of house room is the man who is only just convinced of the

desirability of paying for more accommodation The marginal purchase is the increase or decrease which some one is only just persuaded to make, and the elasticity of demand comes in because greater cheapness of the coin will persuade people or governments to go further in their purchases of it, and persuade them to go much further or only a little further according to circumstances Possible economies in use and the competition of available substitutes play just the same part as they do in regard to ordinary commodities Demand is checked by the rise of value just as in the case of other things

The supply side of the problem of the value of the precious metals is no more anomalous than the demand side

Gold and silver are produced like other things, because the producers want to get money But it is just as true here as elsewhere that people only want money in order to buy other things with it, so that their real aim is the acquisition of these other things and services. Thus though they produce gold in exchange for money, which may be gold, or based on gold, they are really exchanging it for other commodities and services There is nothing mysterious about the way gold comes from the sources of supply into the hands of the people, either as currency or as other things made of gold It is exchanged for commodities and services just like coal or any other mineral The workers earn bread and meat and other things by their labour in producing it just like workers in other industries The owners of the machinery employed obtain profits and with these profits buy the things which they want in just the same way as the owners of machinery employed in other ways The owners of the mines or other sources of supply sometimes live in luxury in Park

Lane and sometimes starve in Soho or on unproductive and unhealthy diggings, but all that they do get is got in the same way—by exchange of gold for money which is immediately paid away for other commodities and services—these being the real thing ultimately got in exchange Every ounce of gold coming into the commercial world is exchanged for—"sold," if we may turn the word round to signify its converse—for commodities and services other than gold, and when plentiful in relation to them, it will tend to be of smaller value—will be cheaper—than when it is less plentiful. The truth of this is illustrated by the high prices of commodities and services in newly discovered or inaccessible gold-producing areas. In an area in which gold has only just been discovered gold will be of small value (general prices will be high) because it is plentiful there in comparison with commodities which have to be brought there, and with services which have to be performed by persons brought there: if the area is easily accessible, this will only be temporary, for the high prices and earnings will speedily attract commodities and workers But if the area is and continues to be difficult of access from the rest of the world, like the Australian goldfield of the eighteen-fifties, and the Transvaal and the Yukon later, the value of gold will remain lower (general prices will remain higher) there than in the old-settled thickly peopled parts of the world because the supply of commodities and workers to the area will remain restricted by the cost of getting them there If any one doubts this explanation he has only to ask himself whether he believes that if goldfields like those of Australia and the Yukon had been discovered in Yorkshire or on the banks of the Rhine or the Hudson, there would have been any long continuance of much higher prices in the immediate neighbourhood than in the rest of the world.

Obviously there would not, and the reason would be that the services and commodities would soon be present in sufficient quantities to equalize matters

When gold mining was carried on in so speculative a manner as it was till quite recent times, people were tempted to think that cost of production had little or nothing to do with the value of gold But now we hear of mines on the margin which cannot be worked if the prices of commodities and services continue so high This simply means that they cannot be worked when gold is so cheap We are sometimes told that gold is unlike other commodities in the fact that the stock is so large in comparison with the annual output, and this is put forward to justify regarding the value of gold as being not affected by the cost of production like that of other commodities But there are other commodities besides the precious metals, for example, houses, of which the stock is large in proportion to the annual output, and no one thinks of suggesting that cost of production does not play its usual part in relation to these. Producers of gold sometimes reap large profits and sometimes small profits, and so do producers of houses A largely increased demand for gold cannot be satisfied rapidly, neither can a largely increased demand for houses. Double the output of plums in any one year, and you will enormously reduce the value of plums double the annual output of gold or houses and you will produce nothing like as much effect

Anticipation, correct and incorrect, plays the same part in regard to the value of gold as in regard to that of other things The terms on which people exchange things depend not on what is, but on what the exchangers believe. About the present they are often misinformed, but their mistakes soon appear and mostly cancel each other, about the future they

can only speculate, some time must elapse before the truth appears, and the mistakes are often mostly in one direction so that they do not cancel each other.

Now the price of a thing at any moment is constantly influenced by anticipations of what the demand for and the supply of the thing is going to be in the future, and the more durable the thing is, the more important are the effects of these anticipations likely to be. Thus plums were not a penny cheaper in the summer of 1918 because next year's crop was universally expected to be much larger. But when any one is in search of a house, not to rent for a short time but to buy for good and all, he finds himself met immediately by the owner's views about the demand for and supply of houses next year and many years after that. If there is general agreement that the demand for houses will be good and the supply poor for many years, the value of houses will be higher than if the contrary is the case, whatever the present quantity of houses and whatever the present desire of persons for house-room and whatever their number and their means to pay for what they desire may be. It is just the same with gold as with houses, except that there is perhaps a little more probability of general error in one direction or the other in consequence of the widespread impression that gold is invariable in value. In considering whether to buy iron or any non-precious metal, and even a precious metal which is not the standard metal, men think of the future demand for and supply of that particular metal, because they think that these factors will settle its future price: but they will think nothing about the future value of the gold they are going to give for the iron. Estimates of the future value of gold, if made at all, are made quite unconsciously in the estimates which are formed of the likelihood of a general rise or fall of prices. If

people think there is going to be a general rise of prices they think—without knowing it—that gold is going to fall in value, and act accordingly. Their joint judgment is more likely to be wrong than their joint judgment about iron or tin or houses because they do not take the particular circumstances affecting the commodity into consideration This is perhaps the explanation of the fact that at one period for no definite discoverable reason people generally overestimate the prices of the future and therefore cause a boom in the prices of the present with the result of subsequent fall and depression

Whatever the cause of a boom, the high prices which mark it are synonymous with a low value of gold, which seems in strange contradiction with the ordinary view that in a boom "every one wants money" But the contradiction disappears if we bethink ourselves what every one wants the money for: it is to buy commodities and services in hopes of making a profit because "things are going up" People may want money, but they only want it because they want commodities and services; the fact that commodities are supposed to be going up makes it desirable to lay money out on them at once if the money is kept, it will not buy so much The pressure is not to add to money stocks by selling, but to deplete the stocks of money by buying as far as can be done without too great inconvenience and risk. Individuals and banks will try their hardest to carry on with the smallest possible stocks of gold, when gold is the one important thing which they do not expect to rise in value

Thus, even if every one always paid in gold for everything immediately on receiving it, a preponderance of expectation of higher general prices (lower value of gold) in the future would to some extent raise general prices (lower the value of gold) in the

present. But people do not always pay on delivery: they frequently induce the seller to let them have the goods on condition that they will pay some time (in all important cases at some definite time), after delivery. The seller then gives the goods for nothing at the moment because he contracts to receive a certain agreed sum of gold at the agreed future date. The buyer of the goods contracts to deliver this gold at the future date. If both buyers and sellers are influenced by some wave of sentiment which makes them believe prices will go higher, the prices at which these contracts are concluded will be higher, whether there is any justification for the belief or not.

History shows that war raises prices (lowers the value of gold), and this seems very surprising to those who regard gold as the sinews of war. If it is the sinews of war, they think, it should rise, not fall; all belligerents seem to want money very badly, and gold is the best kind of money and that which they seem to want most. But all this is fallacious, money is not the sinews of war, and what the belligerents want is not money but various things which they hope money will buy. In their hurry to get munitions they are ready to pay away all the money they can acquire by taxes or by promising to pay money (with interest and very likely a premium) at some future date. Far from prizing money more than usual in comparison with commodities and services, they shovel out money and promises to pay money with far less reluctance than in times of peace. As for the special utility of gold, that metal is one of the few which are of no direct use for military purposes. A belligerent may sometimes think it useful to parade a large stock of it, as more than one government did during the war, because owing to the erroneous beliefs of the public this may comfort his subjects

and disturb his enemies, but if clever and unscrupulous, he will arrange that very little of the apparent stock is real gold Nearly every belligerent scrapes together every atom of gold he can get from the currency and elsewhere and sends it into neutral countries to purchase the things which he wants so much more Hence it is perfectly natural that gold should lose value and that the general level of prices should rise in the countries which have and retain a money system in which the unit of account is equivalent to a quantity of gold bullion

Thus the conclusion to which this section of our inquiry has led us is that where the unit of account in money reckonings is either a fixed quantity of free metal (e g. gold) or a coin equivalent to such a quantity, the value of money (and therefore the general level of prices) depends on the value of the metal, which is determined in the same way as that of other commodities by the same kinds of influences acting on demand and supply

§ 4 *The value of money or general level of prices where the unit of account is a coin of which the issue is limited*

So much for the simplest monetary system, in which the unit of account is literally or in effect a definite weight of a certain metal The system which can be most conveniently taken next is that in which the unit of account is still a coin, but a coin the value of which is not indeed wholly divorced, but is to some extent separated from the value of the bullion of which it is made

The coinage of a particular metal may be "free," in the sense that any one may insist on having any amount of that metal coined for him by the Mint, without being gratuitous or done without charge After all, we may reflect, coin is a manufactured

article, and why should it alone be manufactured for nothing? Why should not people who want coin pay for the cost of making it up as well as for the raw material, just as they pay for the making of flour into bread and the making of white paper into a printed book? Where coinage is gratuitous, it is always paid for out of Government revenues, because Government is the only agency which will do it for nothing If private enterprise takes up the business (a thing not altogether unknown[1]) it will certainly leave the demand for coin unsatisfied till coin is enough above the raw material in value to make it worth while to manufacture it. The Government might act, and sometimes has acted, on the same principle, and make the same charge for coining that private enterprise might be supposed likely to make if under ordinary competition. Further, the manufacture is one very strictly monopolized perhaps no other monopoly has ever been protected by such draconian penalties as the monopoly of coining What is there to prevent governments from charging considerably more than the mere cost of coining? Something was exacted under the name of "seignorage" by the seigneurs or lords who exercised the right of coining in mediaeval times, and doubtless they would have made the percentage much higher if their monopoly had been secure from the introduction of foreign coins into their territory Modern governments could probably charge more with safety, but have been restrained from making heavy charges and sometimes from making any at all by the reason naïvely suggested by the preamble of the statute 18 Car. II c. 5, which established gratuitous coinage in England, "An Act for the Encouragement of Coinage" This runs "Whereas

[1] For a fairly modern example, see *Quarterly Journal of Economics*, August, 1917, pp 600–634.

it is obvious that the plenty of current coins of gold and silver of this kingdom is of great advantage to trade and commerce."

The effect of a charge for coining is to tend to raise the ordinary value of the coin above that of the uncoined metal by the amount of the charge, just as any charge for the manufacture of any other article ordinarily raises its price by a corresponding amount above the value of the raw material It restricts the production until the manufactured article is sufficiently above the value of the raw material to make the manufacture pay So, if our Mint coined all gold brought to it, but charged 5 per cent, any one who brought enough gold to make 100 sovereigns would only get 95 sovereigns in exchange for it, and in consequence no one would bring gold to the Mint so long as he could get more than 95 sovereigns—£95—for that amount of gold elsewhere. Whenever it was worth while to get gold minted it would be because the market price of gold was only £95 for the quantity out of which 100 sovereigns were made, and when the price of gold is at that level it means that ninety-five sovereigns—£95—will buy enough gold to make 100 sovereigns, so that the sovereign is worth $\frac{100}{95}$ of the gold of which it is made, or to put it in other words, that the coin is worth one-nineteenth more than the gold in it.

It cannot be more than this for any appreciable time where coinage is "free," i e. any one can bring as much gold as he pleases to the Mint and have it coined on paying the charge So if the demand for coin were to increase rapidly, it would be met by a greater supply On the other hand, the value of the sovereign might easily fall below a hundred ninety-fifths of the gold in it for a period of some duration, owing to decrease of demand new coinage would not take place in this period The value could not in

any case fall below that of the gold in the sovereign where the possibility existed of turning the coin into uncoined gold by the simple process of melting So the effect of seignorage is to keep the value of the coin always between the metallic value and that value *plus* the seignorage, and in progressive and even in stationary periods to keep it at the higher end of this limited space

We must be careful not to be confused by changes in the mere form of the transaction For a person to take raw material to a manufacturer to be made up for himself, and remunerate the manufacturer either by letting him keep a part of the product or by paying him money for the service rendered, was once a common method, but is now obsolete, surviving even at Government mints, if at all, only in name. Gold producers do not now bring or send their gold to a mint and receive back the same gold less seignorage and other charges, if any, but sell their gold to the mint (or a bank which acts as its agent) for money paid to them, and they regard themselves, like other producers, as receiving a price for their product So there are "mint prices," prices given by the mint for gold, and when a seignorage is exacted, it appears in the form of a difference between the mint price of an ounce of gold and the amount of coin made out of an ounce When, for example, the mint price of an ounce of "standard" (i e. $\frac{11}{12}$ pure) gold is £3 17*s*. 10½*d*. or £3·894, and that ounce is coined into £3·894 sovereigns, this shows an absence of seignorage a seignorage would be introduced by the interposition of a gap between the mint price and the amount of coin made out of the ounce, e g a lowering of the mint price to £3·75 per oz., while the ounce continued to be made into 3·894 sovereigns, would yield the Government a gross seignorage of £0·144, or 2*s*. 10½*d*. per oz.

On the value, measured in commodities in general, of the metal of which the coin is made, seignorage has no influence except in so far as it tends to reduce the demand for that metal by diminishing the quantity taken up by the currency, and this may be taken as a practically negligible effect when seignorage in only a single country is being considered We need, therefore, scarcely encumber the exposition by making an allowance for the tendency of seignorage to depress the value of bullion: the matter is too trifling to be worth bringing into account.

As seignorage is seldom or never large, and as for the most part it simply raises the value of the coin once for all and then allows it to fluctuate very nearly with, though a little above, the value of the bullion contents of the coin, we may regard it as of little practical importance, but it may be of considerable use in enabling us to understand the effects of limitation in general

When the fact is once grasped that it is limitation of supply, coupled of course with sufficiency of demand, which enables a seignorage to keep the value of the coin ordinarily above the value of the metal of which it is composed by the amount of the seignorage, the way is opened for comprehension of the fact that by a "closing of the mint to free coinage," and coining only suitable amounts, coins made of one metal may be made to circulate at some value fixed by reference to coins made of another metal

This was first discovered in consequence of the very reasonable desire of every one to keep coins made of two different metals, gold and silver, both in circulation at the same time, gold being convenient for larger and silver for smaller payments, though not for the smallest of all. So long as they attempted to maintain free coinage of both metals, governments

were in perpetual difficulties arising from the fact that the ratios which each of them prescribed between their gold coins and their silver coins always sooner or later led to one or the other metal being not supplied in sufficient quantities for the requirements of a convenient currency.

With regard to copper coins the principle was acted on long before it was recognized or understood, and long before it was acted on with regard to silver. Money of small denomination was demanded, Government did not supply the need, and, as usual, private enterprise stepped in The story in this country is roughly that tradesmen took to issuing metal "tokens" for small fractions of the unit of account such as pennies or farthings when the Government did not coin them, these tokens entitling the holder to goods of that value at the shop of the tradesman. They were not always retained for further purchases by the customer who received them in change, but got into circulation, i.e they were generally acceptable, so that things could be bought with them from other people as well as from the tradesman who issued them, although the metal of which they were made was not and did not profess to be of appreciable value. Abuses of course soon made their appearance, and the business of providing these "token coins" was taken over by the Government. They were manufactured by or for the Government and given in exchange for larger money paid by people who wanted the small for purposes of their business. There was no "free" coinage. The metallic value of the coins was considerably less than that at which they circulated without the least difficulty, but some importance was attached to it, and no one seems to have understood that their value was given to them by the demand coupled with the limitation of supply enforced by their being sold to the public at the

rate of 960 farthings, 480 halfpence and 240 pennies to the pound sterling

Even when the whole coinage was remodelled in 1816 no one seems to have thought of applying the same simple plan to the silver coinage, but it was actually applied in consequence of what seems to have been merely a happy accident It was intended to continue "free" coinage of silver, but to make it, as Adam Smith had recommended forty years before, subject to a seignorage of 4s per lb troy weight (the Mint price being fixed at 62s for the lb, which was coined into 66s). But for some reason or other free coinage was only to begin after the issue of a proclamation about it, and the issue of this proclamation was delayed Meantime the Mint bought silver at the market price, coined it, and sold the coins to those who wanted them at the rates of 8 half-crowns, 20 shillings and so on to the pound This method being found profitable to the Mint and satisfactory to every one else, no one troubled about the proclamation, and it was never issued It was only in 1870 that the provision for free coinage after the issue of the proclamation was struck out of the Statute-book, and even then the importance of the change made by the disappearance of free coinage of silver does not seem to have been recognized The usual belief seems to have been the very extraordinary one that the silver coins were kept in their proper relation to the sovereign by not being legal tender for more than £2, as if a disability of this kind could possibly have either kept the value of the coin above that of the metal of which it was composed or have kept it in circulation if the value of the metal was greater than the value at which the coin would circulate The fact that silver coins are legal tender up to and not beyond £2 and that bronze coins are legal tender up to and not beyond £0 05 (a shilling)

First, what would have happened if at some period the demand had fallen off, and that faster than the coin is consumed by abrasion and loss? Suppose a plague which carried off half the population, or an ingenious improvement which led to the substitution of some system of making small payments without the use of coin. In that case some persons or institutions, probably the banks, would have found themselves in possession of inconvenient amounts of silver and bronze coins—more than they could pay out without annoying the persons with whom they did business. The probability is that they would insist on the Mint taking back some of the coins at the ratio at which they were issued, but if the Government obdurately refused, and the falling off in demand was large and expected to continue, the coins would go to a discount, i.e. for the sake of exchanging them for more convenient money people would be willing to submit to some loss on their nominal value, and they would be exchanged for the more convenient gold coin or bank-notes at something below the official ratio.

Secondly, suppose excessive supply. In order to placate some school of currency theorists, or in order simply to make more profit, the Government is not content with issuing silver or bronze coins when they are asked for by persons ready to pay the price, but proceeds to put much larger quantities out by the device of ordering Government wages and postal money-orders in sums up to £2 to be paid entirely in silver.

The same results will follow as in case of a falling off of demand—there will be too much silver coin somewhere, and if the excess cannot be returned to the Mint at par the coin will eventually go to a discount. Additions to the supply made by illicit coinage will of course have exactly the same effects

as additions made by the Mint, and where Government was very weak or inefficient, they might be on a sufficiently large scale to replace the usual Government supply and exceed the appropriate amount, with the same result of bringing down the value of the coin, and this would go on until the value became so low that it would not pay the illicit manufacturers to produce enough to bring it still lower. The actual danger from illicit coinage does not appear to be great, owing to the fact that coinage on a large scale cannot be concealed, and concealed coinage on a small scale is not a very remunerative manufacture, even when the cost of the raw material is very small compared with that of the finished article.

In fact the system has been perfectly successful, not only in this country, but wherever it has been tried. Some countries have made a slight improvement on the English system by making the silver coin redeemable or "convertible" at their mints or Government banks. This means that the Government is not only ready to sell the coin at the prescribed ratio, but is also ready to buy it back at that ratio. Thus the possibility of a falling off of demand is provided for, and no doubt that is desirable. In this country there is little doubt that in case of a considerable falling off of demand the Government would be compelled to take back enough of the coin to keep up its value,[1] and the obligation might just as well be acknowledged at once.

If the value of the metallic contents of a coin of this kind is not originally very much below the value fixed for the coin, the particular arrangement made will perish in the event of a considerable rise in the market price of the metal of which the coin is made.

[1] This was written in 1918. From 1921 to 1924 large withdrawals were made at the expense of Mint profits and the Currency Note Account.

This will happen because the metallic contents of the coin will then be worth more than the value at which the coin is rated and circulates, and the cheapest source of supply to any one who wants the metal for industrial purposes will be the coinage. Thus if silver went up to more than 66*d* the oz troy, instead of buying silver in the bullion market manufacturers of silver goods in this country and elsewhere would as far as possible get what they wanted by melting English silver coins, which as coins are only worth 66*d* the oz troy, and which they could therefore get at that price in small quantities, and at a very little more than that price in large quantities. The silver coinage would disappear, and every one would be inconvenienced till some substitute equally good was discovered—in some countries this inconvenience has actually occurred. The way to prevent it is for the Government to take time by the forelock and issue a lower weighted (or more alloyed) silver coinage before the depletion of the coinage begins, and to draw in as fast as possible the old heavier (or purer) coin. If this is done sufficiently promptly a balance of silver will remain in the hands of the Government and no one will be hurt.[1]

There is no necessity for a whole series of coins of this character to contain the same proportion of metal to their coin value, and it is often convenient that they should not. This was recognized when to make them more portable our pennies were made less than double the weight of the half-pennies, and the principle might well be applied to coins of higher denomination. The threepenny piece is too small and the five-shilling piece and the American dollar are too heavy and bulky.

[1] After this paragraph was written the price of silver rose greatly, and in the session of 1920 parliament authorized the issue of silver coins alloyed fifty per cent.

Nor is there any reason why such coins should not, when convenience suggests it, be made of the same metal as the standard coin When Lord Randolph Churchill was Chancellor of the Exchequer it was proposed to reduce the metallic contents of the half-sovereign, while keeping it in circulation at the rate of two to the pound. The coin is subject to a large amount of abrasion, and it was thought it might as well contribute towards its own maintenance, so to speak, by being issued in the first place at a profit

Towards the end of the nineteenth century this principle that sufficiency of demand and properly limited supply will keep the value of a coin above that of its metallic contents was applied to standard coin in several parts of the world, of which India was the most important

The Indian Government was troubled in various ways, unnecessary to describe, by the change in the ratio of value between gold and silver The standard was silver, and a silver coin, the rupee, was the unit of account The ratio of value which had prevailed for a long time between the value of gold and silver in the markets of the world made the value of the rupee to the gold sovereign or pound sterling about 10 to 1, so that in ordinary language in England the rupee was said to be about 2s, while in India the pound was said to be 10 rupees But the ratio was rapidly changing, so that it was said in England that the rupee was falling, and in India that the pound was rising The Indian Government wished to stop this movement, and also to link up India with the Western world, in which the gold standard was predominant. After some resistance on the part of the British Government, it was allowed to adopt a scheme under which the supply of rupees to the currency was to be so restricted as to keep their value up to the ratio of 15 to the £1. The possi-

bility of the ratio between silver and gold varying again so as to make the metallic contents of the rupee equal to more than one-fifteenth of £1 was recognized, but was not regarded as an objection, inasmuch as one of the objects of the change was to keep the rupee higher than it otherwise would be If it went higher than 15 to the £1 the new system would simply disappear because no longer necessary There would be no melting down of the silver coinage, as there would in similar circumstances in England, because there would be no gold currency in the way to prevent the coined rupee rising in value along with silver

Some of the older economists and financiers of the time said the scheme could not possibly work, and were greatly pleased when their prophecies seemed to be justified by the failure of the rupee to stand immediately at the intended rate But this was only the natural consequence of insufficiency of demand, the demand was not at first big enough to make the mere stoppage of new coinage bring the value up to the ratio Soon, however, demand increased, and gradually increased enough to overcome the counteracting effect of some new supply in the shape of rupees which were outside India and now came back because they were worth more there than outside the rupee rose in relation to gold so that merchants in India and England were able to do business approximately at the ratio of 15 rupees to the £1, and the Indian Government could pay approximately £1 due from it with 15 rupees And little difficulty was found in maintaining that ratio.

The rupee consequently came to be one-fifteenth of a pound just for the same reason as the English shilling is one-twentieth of a pound—there was a sufficient demand for it and not too much supply The difference was that in India there was no gold

sovereign in circulation, so that the ratio fixed for the rupee was not with a domestic coin but with one circulating in another country, and could therefore only be seen at work in the business transactions between the two countries, commonly called the exchanges. Hence the name "gold-exchange standard" applied to the monetary system of India and other countries with silver currencies kept to the standard of gold. But we must beware of imagining any natural pre-eminence of gold over silver. The same system might be applied with equal ease to keeping the value of a gold coin at some fixed ratio with the value of the silver coin of another country or indeed with the value of any other clearly cognizable commodity or even with a collection of commodities such as appears in the formation of an index number of prices. The Swedish Government came near adopting a plan of this kind in 1916, when it put hindrances in the way of the entry of new gold, but the object to be aimed at was not properly understood, and the manufacture of paper substitutes for coin was not adequately limited, so that the experiment proved completely abortive, the value of the Swedish currency eventually falling not only down to but considerably below its original parity with gold (See Gustav Cassel, *Money and Foreign Exchange after 1914*, pp. 79-100.)

The conclusion of this section is that given demand for a coin, adequate restriction of supply will keep its value up to any required level above that of its metallic contents. It is not, of course, a useful corollary of this to say that adequate *additions* to supply would keep its value down to any required level *below* that of its metallic contents: that is perfectly true, but adequate additions cannot be made, because a coin worth less as a coin than the bullion of which it is made will always, law or no law,

ultimately be melted to be turned into something else. Consequently where the unit of account is a coin regulated in supply, the value of money is never lower, may by chance occasionally be equal to, and is ordinarily higher than it would be under free and gratuitous coinage. How much higher depends on the particular standard of restriction adopted: it may be higher by a given percentage; it may be higher by the amount necessary to make it conform with the variations of some other money, as the Indian rupee was kept higher by the amount necessary to make it one-fifteenth of £1; or it may be kept as much higher as the restricting authority judges desirable by some rough estimate, or as much higher as will preserve stability of value as indicated by some index number of prices.

It is no objection to this conclusion to say that the value of a coin restricted in supply may be reduced by the competition of paper currency. That is merely one of the numerous things which tend to reduce the demand for the coin, and may make the demand insufficient to keep its value over that of its bullion contents. The case will come under notice again in the course of the argument of the next section.

§ 5. *The value of money or general level of prices where the unit of account is a bank-note or currency note.*

In modern times metal discs stamped with certain designs and lettering are not the only things with which people buy and for which they sell. They also use scraps of paper on which are figures or words (or both for safety) indicating amounts of the unit of account, for example "£1," "Ten shillings" (which is half a pound sterling). There is usually other reading matter on the scraps, but it is not commonly read or regarded as of any more importance than (what is to most people quite unintelligible) the

"DEI GRA: BRITT: OMN: REX FID: DEF: IND: IMP:" round the King's head on our coins Provided the paper will be taken for the amount printed conspicuously on its face, wherever we are likely to offer it, we do not trouble ourselves whether, like a bank-note, it carries the promise of some person or institution to pay that sum at a particular place on demand (*scil.* in business hours), or, like a currency note, says that it is legal tender (i e. that we can compel any one to whom we owe the sum to choose between accepting the paper in discharge of the debt and going without payment altogether).

How such "notes" first got into circulation along with coins in various countries and at different times is an interesting historical question well worth studying. But the answer is lengthy and not material to our present purpose It will suffice to suggest a few of the reasons why a demand arose for such a currency. Sometimes the demand arose from the bad state of the coinage. When base coin was common and originally good coins were liable to be much clipped without immediately being rejected by the next person to whom they were offered, and when all sorts of good and bad foreign coins found their way into each country, the inexpert person never knew what he would actually get if he accepted say £50 or £100 tendered to him by a buyer or a debtor, and even an expert would take some time examining, weighing, and perhaps assaying some of the coins What more natural in such circumstances than that a person, having once got a quantity of coin, should hand it over to some expert man or institution with a reputation for honesty to be examined and certified as amounting to a certain sum? And then what more natural than that having got the certificate he should use it instead of the coin itself to make his next big payment with? Instead of offering a

doubtful heap of metal which may or may not amount to what he says it does, he is able to offer a certificate or note which will entitle the holder who accepts it to something much more definite: all that is required is that the certificate or note should be made out in such a form that handing it over from one person to another—delivery—will transfer the ownership of the certified quantity of money, and the certificate is then an actually better medium of exchange than the coin itself, and there is very naturally a demand for it, it becomes generally acceptable, it is "paper currency"

But even if the coinage is above reproach, a demand for paper currency can scarcely fail to arise. To keep a large amount of money in coin is to keep a bulky article which offers peculiar attraction to thieves on account of its retaining its value when it has lost its form, so that it cannot be identified. It is natural that any man who has no convenient strong-room will wish to deposit any considerable sum in some safe place and take a receipt for it, as one good coin is as good as another, he will not ask the person with whom he deposits the coin to promise to give him back the actual coins deposited—a promise to pay "the sum" deposited will suffice. Provided the written promise is in such a form that handing it over will transfer the owner's claim on the person who has the coin to the new holder, it is evident that when the owner wants to make a large payment he will do well to hand over the promise instead of fetching out the coin from deposit, and the person whom he is paying will do well to accept it. It will clearly be convenient in view of such possibilities that the person with whom the coin is deposited should make out his promises to pay in round sums—£20, £100, and so on, so that several may be pieced together to make up any particular payment. When this is

done, the promises or "notes" pass from hand to hand easily, become generally acceptable, are "paper currency" There is a demand for them because they are more convenient for keeping and paying large sums than gold, and still more than silver. They can be more easily stored and carried: each one is identifiable by its date and number and so less attractive to thieves than coin True, they are more easily destroyed by fire, but the honest issuer does not take advantage of that accident

The person who "issues" the notes makes his profit by lending out most of the coin deposited, knowing full well that it is vastly improbable that many of the note-holders will all at once want to exchange this new currency for the old heavy bulky and inconvenient coins. Bold competitors will start in the business: on the strength of a little capital, or the pretence of a capital, they will issue notes by way of loan to borrowers without waiting for deposits, and the demand is soon fully supplied

In some such ways redeemable notes get into circulation.

At this stage it is natural to say that the notes owe the fact that they circulate to the fact that the issuers must redeem them if required. But something more than redeemability is required to make them circulate; when a note is redeemed it is at the end of its circulation, and what we want to know is rather why notes are not presented for redemption at once instead of circulating They are kept circulating not because they are redeemable, but because other people than the issuer will take them That is, because they are convenient to keep in hand in order to make future payments with, there is, in fact, a demand for this kind of medium of exchange, so that people like to have it in preference to an equal amount of coin

That redeemability, or "convertibility" as it is

commonly called, is not essential in order to make notes circulate is shown by the fact that notes which the issuers will not in fact redeem and which are therefore called "inconvertible" notes will circulate, and an inquiry for the cause of their circulation shows it to be a demand, although often what is called "an artificially created demand," for notes

In order to be able to put convertible notes into circulation an individual, or company of individuals, must have a considerable reputation for solvency. Notes not payable on demand but only payable at some future date without interest will not be accepted even from a solvent person or institution at their face value, and if issued at a discount so that they bring interest, they will not pass from hand to hand like coin and ordinary notes, because the discount at which they must be taken is always diminishing Notes not bearing interest and not payable either on demand or at any future time, if offered by an individual or company of the most undoubted solvency as something new and fresh, would only be laughed at

But when notes have got into circulation as convertible notes and people have become thoroughly accustomed to accept them and to find them acceptable by others, their convertibility may sometimes be taken away without destroying this general acceptability of the notes and the consequent demand for them Of course, if the public receive a rude shock by being told that such and such a bank is insolvent and its assets will not be sufficient to pay its notes in full, the notes will cease to be acceptable But some less disquieting explanation may be given for "the suspension" of convertibility If the Bank of England in 1797 had taken pains to make it known all over the country that it could not continue to pay gold coin for its notes on account of the insufficiency

of its resources, and that it did not think it could ever resume the practice, the notes would have ceased to be generally acceptable and consequently ceased to circulate and lost their value at one blow But instead of doing that the Bank directors went to the Government and secured the passing of a law restraining them from redeeming their notes The public thought little of this · the notes looked just the same as before, and continued just as convenient, and every one except Lord King long afterwards went on taking them just as before. The demand for them was unaffected, and the supply for the moment continued just, or nearly, as much limited as before.

In some such way an already existing demand for a convertible note can be maintained for it when well-informed people, and even much larger numbers, know that its convertibility has disappeared Demand and limitation of supply account for an obsolete blue Mauritius *2d.* stamp selling for a thousand pounds: why should they not also account for a convertible note retaining its old value even when it is no longer convertible? The Government of Mauritius certainly does not promise to redeem the stamp at that or any other value and never undertook to accept it as payment for postage for more than *2d.*, but a dealer will give £1,000 for it because he knows he can pass it on for more. He will not, it is true, give £1,000 for it if he can only sell it for that sum, while any one selling five pounds' worth of goods in 1797 would take a £5 Bank of England note, although he could not expect to get more than £5 for it, but the difference is only the result of the demand for the five pound note being a demand for currency, whereas the demand for the stamp is a demand for the satisfaction of collectomania

It is perhaps impossible for private individuals

separately or in association to make a perfectly new issue of inconvertible notes without the assistance of Government, but such an issue can be made by or with the active help of even a rather weak Government This is possible partly because the public has been accustomed to regard the note currency as more or less arranged for by the Government, and therefore to look upon anything which is allowed to circulate as being "good"—it trusts the Government to do with notes what it does with coin, to see that nothing "bad" is in circulation—and partly because the Government assumes the power of interpreting the name of the unit of account This power is commonly called the power of changing the law of legal tender At one time, for example, gold coin may be the only legal tender, then a contract to pay "one hundred pounds" can only be fulfilled (unless the other party agrees) by the tender of 100 sovereigns or 200 half-sovereigns. Government may then enact that notes issued by some bank or by its own Treasury shall be legal tender, and forthwith every one who has contracted to pay "pounds" can pay in these notes It is true that if the issue is very unpopular, the mere making of it legal tender will not bring it into general circulation, because people will find means for refusing to deal with those who insist on paying in it, but the law certainly does help The power of the holder of a note to make his creditor accept it in payment is not exactly the same thing as the note being generally acceptable, but it goes far to create general acceptability, since a person's reluctance to accept is largely overcome by the feeling that he can "pass the thing on." Governments have often been helped in getting their notes into circulation by the fact that they have forbidden private persons to issue convertible notes for small denominations which would have been

readily accepted if allowed. When desirous of issuing inconvertible notes themselves, they pay no attention to the arguments against small notes and thus their issue satisfies a previously existing demand

After this preface about the nature and origin of "paper currency" we come to the question, what effect it has on the value of the unit of account, or, in other words, on general prices.

We must be careful not to fall into the mistake of imagining that because a note-issue circulates at a par with coin, as for example a five-pound Bank of England note before the war would readily exchange for five sovereigns, therefore everything in regard to the value of money and prices is just as it would be in the absence of the issue The extent to which notes take the place of coin is commonly very much overrated Writers have sometimes supposed that every issue displaced an amount of coin equal to its own total amount less any reserve kept against it by the issuers This is very far from being true, since the superior convenience of notes for the higher denominations of currency—that is for sums above five shillings or perhaps something rather less—leads to a much larger quantity of currency (coin plus notes) being kept on men's persons than if there are no notes Nevertheless it is true that all or most note-issues do to some extent economize or "displace" coin, and thereby reduce the demand for it We may certainly take it that the general tendency of note-issues, especially when the notes are for small sums and therefore compete with coin much more than with other machinery for paying money, is to reduce the demand for coin, though they need not displace coin to their full amount

Where the coin is restricted and has a much higher value than its metallic contents, a note-issue, although it retains its par value in coin, may thus have a

considerable influence upon the value of money, reckoned as it is in this restricted coin. For example, if at the time the Indian Government was bringing the rupee up to 1s 4d by restriction of coinage, either it or banks had been successful in issuing and keeping outstanding a large issue of notes (convertible or inconvertible) of small denomination, the rise of the rupee would have been greatly obstructed in consequence of the reduction in the demand for silver rupees When the scheme had attained success such an issue might obviously have sent the rupee down again to the value of its metallic contents

But that is not all An issue, convertible or inconvertible, although circulating at par with the coin tends to reduce the value of the coin and raise prices even when that coin is like the English sovereign before the War, always on a level with its metallic contents, or like the Indian rupee in the case just imagined has already been driven down to a level with its metallic contents It does so even when the coin may be melted down and exported because it tends to reduce the value of its metallic contents the demand for coinage being reduced, the demand for and therefore the value of uncoined bullion will be reduced, so that the meltability of the coin will not altogether save it from being pulled down by the diminution of demand for it caused by the competition of the notes This, however, though important in any large view of the subject, is negligible when the effect of a note issue confined to any one country is concerned · the bullion of which the value is depressed is a mundane commodity not likely to be very appreciably affected by any probable single change in the demand for the coin of any one country

At this point the power of a convertible issue to depress the value of money and raise prices stops,

provided the coin may be melted and it or bullion may be exported. Money is still reckoned in a coin which is convertible into bullion, and therefore cannot go below its bullion value. The conditions of the supply of the convertible notes prevent the value of any of them from going below the value of the coin, and the coin cannot go below the value of its contents because the supply of it would then be reduced by melting.

That the supply of the convertible notes of any denomination cannot be so large as to cause a gap to appear between their value and that of the coin they promise to pay is so obvious as to scarcely need explanation. If there was such a gap any one who had one of the notes would run to the issuers to get it redeemed: the note by hypothesis is circulating at par: a pound note pays a pound debt and buys an article priced at a pound, and "the change" for it is twenty shillings, which all the arithmetic books agree in making a pound. Any gap between it and sovereigns would therefore appear in the form of a sovereign being worth more than a pound, and if a sovereign could be openly sold for more than a pound, notes would be rushed in for redemption by holders anxious to make a profit, until parity was reached again, or all the notes paid off, or the issuers bankrupt and the notes out of circulation. Convertible notes thus cannot be kept outstanding in numbers which would lead to their being less in value than the coin they promise to pay, and *a fortiori* they cannot be issued in such numbers: it follows that no more can be put into circulation than will be compatible with their keeping their par value. The bankers may try to get more into circulation by paying all their own household bills with them, but if there are enough out already, this will only end in the tradesmen presenting the notes for redemption. It may occur to some banker before breakfast, when the intellect is weak,

that it would be a fine thing to encourage people to take his notes by offering them at a small discount, but after breakfast he will remember that this would cause an enormous demand for his notes, but that they would all be immediately presented for redemption so that more might be asked for and he would be ruined by the discount. There is, in fact, no possibility of the convertible note being below the value of the coin which it promises, and therefore it cannot drag the value of money—the unit of account of money—below the value of the bullion contents of the coin, when that coin itself is protected by free convertibility into bullion from being so dragged down. If the freedom of owners to do what they liked with sovereigns which prevailed in England before the War had been maintained, the introduction of an issue of convertible one-pound notes (formerly forbidden) with only an ordinary reserve against them, would doubtless have tended to drag down the value of English money, i.e. of £1 and all multiples and fractions of £1, and therefore to raise prices. But it would only have brought the value of the pound down along with gold throughout the world and only have raised English prices along with prices in the world at large. And a depression thus caused, though widespread, would be of trifling depth.

An inconvertible issue has more power than a convertible of depressing the value of the unit of account and raising prices within the country where that unit is employed.

Inconvertible notes may circulate at the full value of the bullion contents of the coin indicated on their face and even at the full value of the coin when it is restricted so as to be worth more than its bullion contents. The testimony of history is conclusive on this, and the fact is easily explained by the ordinary principle of demand coupled with adequate limitation

of supply. If the Government or other issuers are able to prevent the manufacture, or forgery as they would call it, of notes by other persons, and if they themselves do not give out or keep out more notes of each denomination than would have been issued and kept out if the notes had been convertible, the issue cannot possibly have any other value than that which a convertible issue would have had Just as the convertible issue is kept up in value by the demand and adequate limitation of supply, so may the inconvertible be kept up.

But though they need not be any greater in total than convertible notes, inconvertible notes may be so, and even when the coin is convertible into free bullion, they can be issued in sufficient amount to press the value of money down below that of the bullion contents of the coin indicated by the unit of account They can, for example, be issued in sufficient quantities to bring the value of the English pound below that of the gold contents of the sovereign, the American dollar below that of the gold contents of an American gold dollar, or the Indian rupee below that of the contents of the Indian silver rupee. That this kind of thing has happened in past history is generally admitted, but when it happens, it is generally unperceived by the mass of the people and strenuously denied by many of those who ought to know. They are so accustomed to expect changes of the value of particular articles to be reflected in their money prices that they cannot understand general prices being higher because the measure of price has been changed

Yet the process is really simple enough The whole of some issues of notes and a part of most may be absorbed in increasing the stocks of currency held by persons and institutions The British Government might have stored in vaults a sovereign for every

pound-note which it issued, or private individuals might have been so pleased with the picture of the Houses of Parliament on the back of the notes, or so patriotic, that every pound-note issued was promptly framed and hung on front parlour walls. Then no additional buying of things would have taken place or been attempted in consequence of the issue. In the first of these two examples neither the British Government nor the people would have had a penny more to spend than before: in the second the Government certainly would have more to spend, but the people would have that much less, and the two together would have no more to spend than before. But this is far from usual. A great part of almost every issue and sometimes the whole of it goes to increase the aggregate amount of money which people and Government together can and do spend on things and services. The notes are exchanged for something: the issuers buy things and services with them or lend or give them to others who do. They may, if a Government, go through the farce of giving them in exchange for other money and then spending that other money instead of spending them directly, but however the process may be disguised, it results in more money to spend and more money spent. The perfectly natural consequence is a rise of prices. Where the notes are convertible into coin and the coin is convertible into free bullion, this rise of prices will not include a rise in the price of bullion, since the value of the coin and bullion must stand on a level. The convertible notes cannot be issued in large enough quantities to cause a gap to appear between their value and that of the bullion to which, through the coin, they are nominally equal. For example, given convertibility of coin into free bullion, it would be impossible to issue as many convertible notes as would bring up the amount of

spendable money far enough to raise the price of fine gold from the par price of £4 2s to £5 7s, because long before that happened, every one who had notes would be running to the issuers to get sovereigns with them: the sovereigns thus obtained could be turned into bullion, and so give the holder a larger amount to spend than if he spent his note. Inconvertible notes, not being subject to this "automatic check," may be issued in greater and ever greater quantities, so that they can cause a gap to appear between their value and that of the bullion to which, through the coin, they are nominally equal.

At first sight it is probable that most of us would expect the gap to appear in the form of a note passing for less than its nominal value, say a pound-note passing for £0·8 or 16s. and a dollar-note for $0·80. This does not happen, and nothing really suggests that it should happen. The pound-note was, and continues to ordinary apprehension to remain, "a pound": it will buy a thing priced in a shop-window at "£1," and it will pay a debt of £1. Failing the note going to a discount, we should perhaps expect the sovereign to "go to a premium," and begin to circulate at some value exceeding £1, say £1 2s or £1 5s. This might happen if people really preferred sovereigns to notes, and if they could shift the premium as fast as changes in the price of bullion took place, but in fact that could not be done: the currency value lags behind the bullion value, and consequently the coins are not kept in circulation at higher prices, but are "driven out," as it is usually said, by the notes. It is not really a case of their being driven out, but of their being attracted out into the bullion or export market by the premium obtainable there and not obtainable so long as they are used as currency. Jewellers and bullion dealers will give more for them in "money," that is, in

notes, than they will fetch as currency, so that they "disappear," the heaviest going first, and the others following as the price of bullion rises

Thus the increase of inconvertible notes when carried, as it can be, far enough, causes a rise of the price of bullion

It has not till lately been well understood, even by experts, that when the coin is not convertible into free bullion, convertible notes may be issued in quantities just as great as inconvertible notes and with exactly the same result Ricardo came near hitting on the fact He noticed that during the suspension of cash payments by the Bank of England it was a puzzle to many people how the inconvertible note could be of less value than the gold it should (through the gold coin) represent, although as a matter of fact, when they had a gold coin they found it would only circulate at the same rate as prevailed before the suspension of convertibility [1] He explained the matter quite correctly as being the result of the legislation which prevented law-abiding people from doing what they liked with the coin there were penalties against melting and exportation which kept the gold coins, so long as they were in the hands of law-abiding people, from being used for any purpose except currency, while *for that particular purpose*, as has just been shown, the coin cannot in practice be used at a value higher than that of the unit of account supposed to represent it. But Ricardo and subsequent writers regarded the point as of little importance, because it did not occur to them that a well-enforced denial of freedom to deal with coin would be sufficient by itself to allow over-issue to take place without the abolition of the convertibility of notes into coin. Recent experience has shown this to be

[1] "The High Price of Bullion a proof of the Depreciation of Bank Notes" in Ricardo's *Works*, p 280

perfectly possible. From August, 1914, to April, 1925, the British Treasury's £1 and 10s. Currency notes were legally convertible at the Bank of England, and as a matter of fact were converted for sufficiently insistent demanders who knew enough not to fail in the *vivâ voce* examination to which they were subjected. But during that period exportation had been made impossible, and the using of the coin for any purpose except currency was forbidden, so that the person who went to the Bank and received a sovereign might just as well have got a round disc of cardboard with "legal tender for £1" on one side and Sir John Bradbury's head on the other, or better still, he might have stayed at home and spent his £1 note like other people. The Currency note could be converted into a full-weight coin, and was therefore described as convertible, but it was not convertible into free gold of the weight of the sovereign, since the sovereign could not be converted into free gold.

Thus convertibility of the note into coin is deprived of all its virtue when laws against melting and exportation of the coin are present and effective. Convertible notes can then be issued without check just like inconvertible notes, and consequently can drag down the value of money below that of the bullion contents of the coin and give rise to the same phenomenon, a rise of general prices including the price of bullion.

When the issuers of inconvertible notes or notes which are only convertible into inconvertible coin issue them so freely that they will exchange for less than the par amount of bullion, when, that is, in other words, the price of bullion rises above the par price, so that the note will no longer buy raw material for the coin which the note represents, the unit of account ceases to be a coin or quantity of metal and becomes a printed symbol on a piece of paper the supply of which depends on the moderation of the

issuers The pound sterling, for example, in multiples and fractions of which all prices in this country are reckoned, ceases to be 113 grains of fine gold and becomes simply "£1" (or one-fifth of £5 and so on), when printed on a genuine note, and the amount of these symbols printed is determined by what the Treasury thinks fit

When the value of money is thus surrendered to the discretion of Government issuers, it usually goes down and the general level of prices goes up rapidly The surrender usually takes place at a time of financial difficulty, so that the very object of destroying convertibility is to remove the necessity the Government or others are under of fulfilling their promises to pay something equivalent to certain definite quantities of bullion In the present state of economic instruction in all countries there is no Government and no people which is likely to understand what is happening The issuers find that further issues themselves directly bring in money easily and apparently cheaply, and very likely at first greatly assist borrowing in other ways by the feeling of ease and prosperity which "plenty of money" at first creates Many other persons profit enormously by the rise in the prices of the things they sell So there is a strong bias in influential quarters in favour of more and more notes, which leads to many arguments in their favour

1 At first when the rise of prices is not yet very perceptible, it is usual to deny that general prices have risen This contention soon disappears, as the issue goes on and prices rise further

2 Next comes the contention that though prices have risen, the currency is quite sound because it is still on a level with bullion—the price of bullion has not risen This is untrue, but usually difficult to disprove, because the time is probably one of con-

siderable confusion · transport may be interrupted by warlike operations so that the price at which gold may be bought from abroad is difficult to ascertain, and the issuers may have taken the precaution of forbidding free transactions in bullion at home But soon this does not matter, because, as the issue goes on, the rise in the price of bullion becomes too great to be denied

3 Sometimes it is contended that a rise in the price of bullion is due not to a depreciation of the money but to an appreciation of bullion. This covers two different contentions between which confusion is frequent:

(*a*) It may mean simply that bullion is higher in value relatively to commodities in general, while money has preserved its old relation to them. As the issue gets larger and larger, this too has to fade into the limbo of discarded arguments. But supposing it were true, it would only be by accidental coincidence, unless the issue of notes was managed with the distinct aim of securing a currency which would always keep the same level of value and preserve a complete stability of general prices. Regulation with this end in view is quite conceivable, and has often been advocated by high authority. It must be noticed, however, that those who put forward this defence of an actual issue are often persons who would be the loudest in their protests against the desirability of the adoption of any scheme for such regulation.

(*b*) The other meaning of the contention that it is not money which has depreciated but bullion which has appreciated, is that the gap between the value of bullion and that of the unit of account and also the general rise of prices are to be ascribed to something that has happened to bullion and ordinary commodities, and not to what has happened to money, and therefore the unit of account has not fallen in value

although it will buy less than before The answer to this is that it implies that value can and must properly be measured in labour cost of production instead of in commodities and services, the idea is that it has become more difficult to get gold and other commodities, and therefore they are more valuable, and the higher price in the unit of account merely gives expression to this, and therefore has not been produced by the issue But we do not measure, and we do not want to measure, value in labour-cost of production; if we did so measure it, everything in savage or primitive times when the productiveness of industry is very low would be of enormous value. So this answer would be of no use if it were true, and that it is seldom, if ever, true is suggested by the fact that it has almost always been put forward as one of the defences of over-issue, and it seems unlikely that inconvertibility and a decline in the productiveness of industry so often go together

4 The more acute Government apologists content themselves with alleging that the issue is only one of two or more causes tending to raise prices There are always many causes tending to raise prices, so that this is sure to be true, and it does not in the least destroy the force of the proposition that the issue tends to raise prices

5 We now come to what is at once the most insidious and the most dangerous of all the arguments in favour of increasing issues This is that the issuers have no control over the issue and that it is "automatic," as it only takes place when the notes are asked for, so that they are "issued in response to a genuine demand and not forced on people." It might as well be claimed that the issue of pocket-money to a child is not under the control of its parents because it is automatic, only taking place when the money is asked for. Old-age pensions,

when first established, might have been paid for some years without any addition to taxation or debt, by giving the pensioners a one-pound note every four weeks, if no reserve had been kept against the notes: would the pensioner's genuine demand for the notes have justified the statement that the issue was automatic and the Government had no control over its amount? If an extra hundred millions war-bonus (or peace-bonus for all the difference it makes) were paid by additions to the £1 and 10s currency notes of £2,000,000 a week, would there not be a genuine demand for these additional notes? If the Government hires schoolgirls at £2 a week to watch a simple machine and defrays the expense by giving each of them two new £1 currency notes which are clear additions to the amount already outstanding, can it be said that these girls do not exercise a genuine demand for the notes?

Every monopolist producer controls his sales, and the Government manufacturer of notes is no exception. The monopolist of an ordinary commodity can limit his sales in one of two different ways, first, by offering a fixed amount of the product for sale by auction, and so letting the consumers determine the price, and secondly, by offering to sell any amount that may be inquired for at a price fixed by himself. The second is the usual method: it limits the total sold in the long run just as effectually as the other. If 100,000 bottles of some patent medicine can be sold at 3s. each, while 110,000 could scarcely be sold at 2s. 6d. and only 70,000 could be sold at 3s. 6d., it is all the same whether the monopolist says he will sell 100,000 bottles a year for what they will fetch, or says the price is 3s and any one who likes can have a bottle at that rate. Just so with notes. The monopolist producers of notes control the issue either by saying they will issue such and such an amount,

or b, fixing the price and selling as many as are demanded at that price

The first method of limitation is easily understood: the producers enforce the limitation simply by not printing notes (and not allowing any one else to print them) beyond the prescribed number. The second method is enforced when notes are convertible into bullion, because that, as has been explained, fixes for them a price or value in bullion below which notes cannot be issued. When convertibility into bullion is absent, the price might be fixed in some other commodity than bullion—in lead for example, or rubber of some well-known quality. The issuers might be bound by law to give a certain number of pounds avoirdupois of lead or rubber in exchange for any note presented to them for redemption. But this would be re-establishing convertibility in the form of convertibility into lead or rubber instead of convertibility into bullion, and gold certainly will not be dethroned to make lead or rubber or any other single commodity reign as the standard of value. The only standard possibly superior to bullion is commodities in general. Actual convertibility of the note into commodities in general is impracticable: the Bank of England could not be asked to hand over the counter a basketful of the commodities represented in an index number. But, as we have seen, notes may circulate on a par with gold although they are not convertible into it, because the issuers may sufficiently limit them by watching the price of bullion and issuing more notes when that falls and fewer when it rises. So notes might be made to circulate on a par with a collection of commodities such as is represented in an index number of prices although they are not convertible into that collection, because the issuers might sufficiently limit them by watching the prices of these commo-

dities and issuing more notes when they fell and fewer when they rose. This is, however, the very last thing that in practice issuers, in the present state of economic instruction, are likely to do. They usually begin by adopting the exactly opposite principle because, incredible as it will appear to future ages, they think "when prices are high, more currency is required" Turn this round, express it in another way, and you have "when the value of currency is low more of it is required" and currency is thus made a striking exception to the general rule that the falling value of an article indicates that additional supply of it is becoming *less* required. It is of course no exception at all When money is reckoned in gold and more gold is produced, the value of money falls (general prices rise) and this indicates that additional supply of gold is less required · when money is reckoned in notes and more notes are produced, the value of money falls (general prices rise) and this indicates that additional supply of notes is less required

When more coal is produced, the value of coal falls, and this indicates that additional supply of coal is less required. Of course, if the coal-producers or the gold-producers accept a lower price for their product, they will find, down to a very low limit, plenty of "genuine demand" for it, but only because the demand has extended to take advantage of the lower price, and so it is with the note-producers: if they will accept smaller quantities of commodities and services in exchange for their notes, they will find down to a very low limit plenty of genuine demand for them, because they are cheaper The only difference between coal and gold and notes is that coal is never money, while gold sometimes is, and notes always are in consequence of which the value required in exchange for coal is always called its

"price," the value required for gold sometimes is and sometimes is not called its "price," and the value required for notes is never in ordinary language called their price

The feeble reply of the apologists to some such criticism as this is that in fact the rise of prices and wages comes first This would be perfectly immaterial if it were true, which it probably is not If it were true, it would only mean that the increase of the note-issue was anticipated When a Government has issued an additional £2,000,000 a week for months together, it is not unlikely that all business will be done on the assumption that this will continue. People may consciously or unconsciously expect a fall in the value of notes (a rise in general prices) just as well as they expect a rise in coal or jam.

When issuers have once adopted the absurd maxim "Higher prices issue more notes," their country finds itself in what puzzled critics call a "vicious circle"—notes are increased, prices rise, notes must be further increased to "carry the rise," prices rise still further, and notes must be still further increased and so on *Ad infinitum?* No certainly there is always an end to it Often the real or fancied emergency which led to the suspension of convertibility disappears before the process of bringing down the value of the notes has gone too far for recovery, and with the disappearance of the emergency much of the bias in favour of that course is lost, and a return is made, perhaps slowly (as in America after the Civil War), perhaps painfully (as in England after the Napoleonic War), to a bullion standard. Two great injustices have been committed · the first to those persons and classes who suffered by the fall in the value of money, and the second to those who suffered by its subsequent rise The two do not cancel each other, since those who gain by the second

are not the identical persons who lost by the first, and vice versa. Institutions, too, suffer loss, though we can scarcely speak of justice in their case: one of the greatest losers is usually the State in its corporate capacity. The trifling gain made by issuing interest-free notes instead of interest-bearing loans is far more than set off by the higher prices which the State has to pay for everything which it buys during a period when its expenditure would in any case have been abnormally large—higher prices which lead to the contraction of debt far exceeding in magnitude what would have been the whole cost of the commodities and services obtained, if they had been paid for at the prices prevailing before and after the period of suspension

Unless a halt is called the end comes with a crash In saying above that increases of the supply of coal or gold would always find plenty of demand at sufficiently reduced prices "down to a very low limit," we had in mind that no commodity is wanted in indefinite quantities. However the demand may extend, it will not extend indefinitely, and with every commodity there is a point beyond which no more will be required, however cheap the commodity can be got. It would take a considerable increase in the supply of coal to London to bring its price there down from say 30s to 10s a ton, but if a further increase of supply brought it down to 2s., it is quite certain that a very little increase on the top of that would bring it down to almost nothing Nobody wants indefinite amounts. So, too, with gold, perhaps even more clearly: very cheap gold would be unsuitable for currency and for ostentatious ornament, so two of the principal sources of demand for gold would cease to exist if gold were found in very large quantities. So it is with notes As long as their increase is sufficiently slow and the total

amount not "unreasonably" large, no one thinks of questioning their utility as currency, and there is plenty of demand at the lower price at which they are put on the market But if the increase goes on, sooner or later there comes a time when the increase is so rapid or the total outstanding becomes so large that even "the public" begins to wonder "what all this means," and when that happens distrust soon sets in, the general acceptability of the notes suddenly ceases, and they become absolutely worthless some other currency is found to take their place

The conclusion to which this section has led us is that where the unit of account is a note, the value of money and the general level of prices depend on the will of the issuers, and that the issuers may, and probably will, if not restrained, bring the value of money down so low and drive prices up so high that confidence in the notes disappears and some other unit of account, such as coin or bullion, has to be used.

The conclusion of the whole inquiry is that the value of money, which is the same thing as the general level of prices regarded inversely, is not an anomalous or even very peculiar thing, but depends in the same way as the value of other commodities upon the various influences which affect demand and supply and that if peoples dislike the rise of prices which is another name for a fall in the value of money, they should insist on adequate limitation of the supply of money.

This is a conclusion which has long been familiar to economists, it is time it was grasped by the men who pride themselves on being practical

PART II

FURTHER ELUCIDATIONS

§ 1. *The Supply of Currency and the "Quantity Theory."*

The sad experience of unlimited currencies which followed the writing of the First Part of this book do not suggest the desirability of abandoning or even modifying any part of the doctrine taught therein, but they do suggest that further elucidation of several matters is required

Some readers have asked, and others probably will ask, "What is the relation of this doctrine to the Quantity Theory of the value of money?"

It includes the Quantity Theory, but contains something more. The Quantity Theory, like so many other statements in economic literature, insists that X "depends on A, other things being equal or remaining the same," regardless of the fact that it would be equally true to say "X depends on B, other things (including A) being equal or remaining the same." It is possible that there may be ten or a thousand things on which X depends, and of each of them it is true to say that it depends on that one when the others are, as it is said, "impounded in *ceteris paribus*." Writers on economic questions frequently overlook this, and imagine themselves at variance about fundamentals, when in fact the only difference between them is that one is more struck by the importance of A and therefore says "X depends upon A, other things (including B) being equal," while the

other is more impressed by the importance of B, and therefore says "X depends upon B, other things (including A) being equal." The first writer then goes about recruiting adherents to the "A theory of X," while the other seeks support for the "B theory of X," though all the time the two theories are really not opposed to each other, but are only two parts of the same theory, each of which is taught by an expositor who thinks less of the other part.

Just so the Quantity Theory of the value of money singles out quantity as the thing on which the value of money may be said to depend, other things (including Demand) remaining the same. It would be very astonishing if this were not true, since it is true of every commodity other than money that its value depends on its quantity, other things (including demand) remaining the same.

Certainly in the case of other commodities we are in the habit of speaking of "supply" rather than of "quantity," but the difference in wording does not seem to be important. The stock of some things (such as milk, or even wheat) on hand at any one moment is so small in proportion to the annual produce of the article, that we think of the stream of produce as furnishing the supply. Of other things, such as land, buildings and railways, the annual production is so small compared with the stock in existence at any one moment, that we think of the stock, rather than the annual produce, as furnishing the supply. In regard to this second class, we talk readily of the supply being increased when we mean that the quantity in existence has been increased. A country is "well-supplied" with railways or a town with a particular kind of house when the quantity of these things is great. Currency is one of the durable instrumental goods, such as houses, of which in ordinary times the stock at any moment is

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very large in comparison with the annual output, so that it is not surprising that in its case "quantity" has been used instead of "supply."

Given a certain demand, increase of the supply or quantity (whichever is the more appropriate word in the particular case) of any article reduces its value, and currency is no exception. The additional currency is usually given by the producer (or issuer) in exchange for commodities and services, and his coming in as a new and additional buyer of such commodities and services raises the price of these things and diminishes the value of the currency which he is offering in exchange Whether the currency is gold or paper this is equally true The gold mine-owners and workers turn their gold into currency and spend it on the things they want. A government involved in a war prints legal tender notes and buys munitions and military service with them. On the return of peace, it is true, it does not itself buy with the currency, but gives it away in doles and subsidies, yet this makes no difference—the spending of the additional currency still takes place, as the recipients buy what they want with it Even if the new currency is only issued by way of loan, the effect is the same the borrowers are then the new and additional purchasers.

Sometimes it is objected that the demand for money is, unlike that for other commodities, inexhaustible, so that the issue of additional currency will not cause its value to fall, since the new issue will always be met by an additional demand for currency. But this objection is absolutely unfounded. It arises from neglect of the distinction pointed out by Sidgwick between the kind of "increase of demand" which raises price and the other kind which he calls, very aptly, "extension of demand." We often say that the demand for a thing has

increased when we only mean that people are taking more of it because they can get it cheaper. It is obvious, however, that it is not this kind of increase of demand that we have in mind when we discuss the effect of increase of demand upon values. We could not say in the same breath that increase of demand for houses raises the value of houses, and that a fall in the value of houses causes an increase of demand for them. We can, however, say in the same breath, that increase of demand raises the value of houses, and that the fall of value *extends* the demand for them (or, vice versa, a rise of value *contracts* the demand). No more in the case of currency than in any other case does the increase of supply defeat itself by causing *increase* of demand. It only *extends* demand, inducing people to hold more currency because the fall of value makes it possible to hold larger amounts with equal sacrifice and necessary to hold larger amounts to secure equal convenience.

Granted that the Quantity Theory is right in asserting that increase of quantity, demand remaining the same, will raise prices and diminish the value of currency, the next question is "How much will any given increase of the quantity diminish the value of the currency?" This, of course, depends on what is now called by economists, following Marshall, the "elasticity of the demand" for currency. The demand for a thing is regarded as being the more elastic the more it will extend on any given fall of price, or, to put the same thing in what for our present purpose is a more useful way, the less difference any given addition to the amount put on the market will make to the price, the more elastic is the demand. If the demand were such that an increase of supply would always cause an exactly reciprocal fall in the value of the article, the elasticity

of demand for the article would be said to be always "equal to unity." So if the elasticity of the demand for currency were always "equal to unity," doubling its quantity would just halve its purchasing power and just double the prices of other commodities, however often the doubling was repeated.

Now, it has very often been assumed that this is actually the case, without any inquiry why it should be so. Though ever since the time of Davenant in the seventeenth century it has been a commonplace that a drop in the supply of a necessary of life below the normal quantity will raise the price much more than in proportion to the deficiency, popular apprehension has never quite reconciled itself to the fact, and persists in thinking it unreasonable It is somehow supposed to be "quite natural" that the price should rise in proportion to the deficiency, but not more. This is probably the explanation, though of course it is no justification, of the neglect to ask why the elasticity of the demand for money should be assumed to be equal to unity.

When the question is asked, the answer is not very difficult. The peculiar use of currency suggests it at once. Each individual holds his stock of currency in order that he may be able to buy a very definite quantity of commodities and services before his stock of currency is replenished. If he is well-to-do and receives his income through his bank, his stock of currency has to hold out till he draws another cheque to "self" to replenish it If, without any alteration in his real wealth, prices double, he will (so far as he is not the creature of habit nor deterred by the weight or bulk of the currency) double the amount of each cheque to "self" (instead of going more frequently to the bank) and hold double as much currency as before Similarly, in the case of a workman whose holding of currency depends on his

weekly wage, if his real earnings (reckoned in commodities and services) are unaltered, so that his wage will buy the same collection of things as before, his wage and his holding of currency must be doubled when prices are doubled. From this it appears quite plainly that the average holding of currency at any time must normally equal in value a particular collection of goods and services. It is only simple arithmetic to infer that the aggregate holding of currency, alias the "quantity of money," must normally equal in value a certain definite aggregate of commodities and services.

This is now so well recognized that it has been made the basis of prognostications of the future which have been realized in practice. When we have found that some rapidly depreciating currency, though nominally immense, has worked out at a ridiculously small sum in pounds or dollars, we have said, "Of course this is an impossible situation; either the value of the currency will go up again or more of it will be issued," and we have turned out right.

But while it is reasonable to assume that we should expect the elasticity of the demand for currency to be equal to unity, we should beware of accepting the doctrine too readily. Great doubt is thrown on it when we reflect that if it were universally true, issuers of legal tender could go on buying goods and services with new issues indefinitely. The process of doubling the currency in, say, the first month, would indeed gradually bring the purchasing power of the unit down to one-half, but as the issuer at the beginning would be buying very near old prices, and only at the end at the new prices, he would have acquired goods and services worth over three-quarters of the value of the total of the old currency. By another issue equal to the old currency he would

only get half as much, but there is nothing to prevent him issuing twice as much in the second month, four times as much in the third, eight times in the fourth, and so on, and then he will be able to go on acquiring the same amount of commodities per month indefinitely. Experience seems to show that the unit of a currency falls to zero in value long before the supply of the currency reaches infinity, and believers in the doctrine have been unable to explain why. They have contented themselves with eluding the point by means of propositions such as, "however many units of currency may be issued, so long as they really circulate, they will always have some value, however small" No doubt, but is it not equally true that so long as they have some value they will continue to circulate? They will stop circulating when they lose all value. The explanation seems to lie in the fact that human intelligence anticipates what is coming When it is seen that the value of currency is steadily falling, people see that it is more profitable to hold goods than currency, the demand for currency fails to extend in proportion to the enlargement of the supply, and its value consequently falls more rapidly The issuer very likely redoubles his efforts to keep up with the fall by issuing new currency at a still more rapidly increasing rate, but all to no purpose—he is bound to lose the race, and the reason is that the elasticity of demand is less than unity.

In the converse case, that of reduction in the supply of currency, there is also reason to expect an elasticity less than unity. As general prices fall owing to the reduction, people will endeavour to protect themselves by displaying greater readiness to part with goods and services, and less to part with currency, and anticipation will thus cause the fall of general prices to outrun the diminution of currency. Pushed to

the extreme limit, the policy would put a stop to the circulation of the currency, as it would all be hoarded, and exchanges of goods would be made by barter But things are never pushed so far, because long before that happens substitutes for the existing currency are always introduced and check the rise of purchasing power For example, as soon as a reduction of our present paper currency went so far as to make £1 worth more than 113 grains of fine gold, substitutes for it, in the shape of sovereigns and half-sovereigns brought from South Africa and elsewhere, would begin to come into use

Hence the doctrine of the elasticity of the demand for currency being equal to unity, though it may be usefully put forward as a first approximation for expository purposes, must not be taken as universally true It certainly is not when rapid change of quantity and intelligent anticipation of the future exist.

§ 2 *The Demand for Currency.*

Early in the preceding section I pointed out that while the supply of quickly consumable articles of which the annual output is large compared to the stock-in-hand at any moment can most conveniently be taken to be the periodical output, yet when we have to deal with things which last a long time, and therefore in ordinary language are said to be "used" rather than "consumed," we often, as, for instance, in the case of houses, treat the quantity in existence rather than the periodical output as the "supply"

A corresponding distinction exists in regard to demand The demand for houses and farms is not in most discussions conveniently conceived as the demand for new houses to add to or replace the old and for new farms just created on the outskirts of civilization, but as the demand of persons who wish

to "occupy" or use farms and houses, both new and old Under Supply we found that currency belonged to the class of things of which the supply can conveniently be taken to be the quantity in existence, and now, under Demand, we may think of currency as being demanded by people who want to hold it rather than to consume it

This idea of the demand for currency coming from the holders runs through the whole of the First Part of the present book, and is most important to the argument put forward there. But it appears very strange to all who have been brought up to believe that the demand for currency is furnished by the number and amount of the transactions effected That belief seems to me to be exactly equal to a belief that the demand for houses comes not from the people who want to live in houses, but from people who buy houses and sell them again forthwith The effective demand for houses evidently comes from those who want to *hold* houses: even the speculator wants to hold for a time Mere "activity in the house market"—a little more changing ownership than usual—only involves an increase of demand in the same sense as it involves an equal increase of supply which cancels it. Whatever may be said about the actual use of the terms, it is clear that the demand which is important as affecting the value of the houses is the demand for occupation Similarly, more transactions for money—more purchases and sales of commodities and services—may in a sense be said to involve increase of demand for money, but in the corresponding sense it may be said to involve an equal increase of supply of money; the two things cancel The demand which is important for our purpose is the demand for currency, not to pay away again immediately, but to *hold* Just as you are a less important demander of houses

if you occupy a £1,000 house than if you occupy a £2,000 house, so you are a less important demander of currency if you keep on the average £5 in your pocket than if you keep £10

The usual talk of "velocity of circulation" is only a clumsy attempt to express this truth If we say that additional sales and purchases may be effected without alteration in the value of money provided the velocity of its circulation is increased, we may equally say that additional transfers of houses may be effected without altering the value of houses, provided the velocity of the circulation of houses is increased. We do not say that, because the futility of it would be obvious, it is so much simpler to disregard both the transfers and the velocity of the circulation of houses and come at once to the ultimate demand, the demand for houses to *hold!*

It may be said that, in addition to the demand of persons and institutions for currency to *hold*, there is also sometimes a demand by banks and governments for currency to destroy, as, for example, happens when the bank or the treasury is reducing the aggregate amount of notes outstanding But as this demand always, or almost always, comes from institutions which have issued quantities of paper and subsequently repented, it is usually regarded as simply reducing the supply instead of increasing the demand In favour of regarding the institution as a demander, it may of course be said that the fact that it acquires the currency to burn rather than to hold is immaterial, since it makes no difference whether the currency acquired is held or burnt, provided it is not reissued It is, some one may say, all the same whether notes which have been withdrawn have been cancelled or are still held by the issuers uncancelled. But this is not quite true, since, if the notes were still held, they would appear

in the total stock which we have agreed to call the supply, whereas, having actually been destroyed, they no longer appear in the total. Consequently, it is more convenient to follow ordinary usage in this matter, and speak of banks and governments which buy up and burn currency as reducing the supply. The analogous case in regard to houses is when houses are bought up by some person or institution for demolition. We think of this as causing a reduction of supply rather than an increase of demand

To clear up our ideas about the demand for currency, let us think of a few obvious causes of increase and decrease of demand for it.

The most obvious cause of increase of demand for a currency is an increase in the number of persons who use it At a very early age—often at his or her christening—each new member of the human race begins to hold a small quantity of currency, and the child of six sometimes has more than his father or mother There are plenty of examples of increase of demand from this source having been sufficient to cause a noticeable increase in the value of a currency which is limited in amount—the Indian rupee after the closing of the Indian mint and the American greenback are often quoted, and the general increase of gold and silver-using populations, though it has not actually raised the value of gold and silver currencies, has at any rate obviously prevented them from falling as fast as they would otherwise have done. The great rise of prices after the Black Death may be given as an example of the converse effect of diminution of population in diminishing the demand for, and consequently the value of a currency

The introduction of anything which economizes currency, i e which makes it unnecessary for people to keep so much currency by them on the average, tends to diminish the demand for currency. The

banking system is the most important agency in this respect How and in what degree it economizes currency and tends to raise prices must be postponed to the next section

A change in the distribution of wealth may cause a change in the demand for currency If the rich and banking portion of the people becomes richer, it does not keep appreciably more currency in its pockets, but increases its balance at the bank But if the poorer non-banking portion becomes richer, it does accumulate currency, not only in its pockets, but also in money-boxes and mugs on the chimney-piece and other strange places

Innumerable are the changes of social circumstances which may lead to greater or less economy of currency and consequently less or greater demand for currency. The calling up of men for military service, and subsequently the large removal of women from their homes for munition-making and other purposes during the recent war, greatly increased for the time the demand for currency, because the members of families, when separated, found it convenient to keep much more currency by them in the aggregate than when they were living at home and together.

Like the demand for other things, the demand for currency is liable to be varied by the miscalculations of mankind about the future. If we were all level-headed prophets, fluctuations of prices would be smoothed out. There would still be slowly rising and falling tides, but waves would disappear. But in fact we all foresee wrong, and our individual mistakes do not balance each other—we foresee wrong to some extent in unison One year we agree in over-estimating the potato crop, and the next year in under-estimating it when we over-estimate it, our willingness to buy early is less than if we foresaw correctly, and for the time demand is kept below

what it would be if prices were kept as stable as possible The same thing happens with currency, though it is not nearly so obvious. If there is a predominating impression that prices in general are going to rise, there will be a predominating tendency to hold commodities for the rise, which will itself raise prices at once Every one can see this, but few notice that this tendency to hold goods back, resulting in a rise of prices, is the same thing as a diminution in the demand for currency.[1] Currency becomes the depreciating article which people in general are less willing to hold. Vice versa, if it is generally expected that prices will fall, most people are more eager to get rid of goods and are more willing to hold currency.

We must not expect to find evidence of increased or decreased willingness to hold currency in actually increased or decreased stocks of currency. If the total is a fixed amount it cannot vary in that way. The evidence is to be looked for in the fact that more or less goods are actually being given for the unit of currency We can have an increased and a

[1] The statement in the text seems at first sight to be contradicted by the fact that sometimes, as in Germany in 1922 and 1923, it has happened that a sudden access of belief that prices are going to rise higher has caused a rush to the banks by depositors anxious to draw out cash to spend But though this has often been spoken of as if it were a demand for currency, it is not a demand for currency to hold, and is no more the effective demand which raises the purchasing power of the currency than is the corresponding rush, which is going on at the same time, to money-boxes and other places of storage for cash In such circumstances A asks B to pay the money which is due to him, not because he wants the money to keep, but because he wants to get rid of it in exchange for something more likely to retain its value If additional currency is printed to prevent the banks being broken by the run, the depreciation simply becomes worse than ever.

decreased demand for houses without finding any alteration in the number or size of houses

The effect of misguided speculation for the rise or fall of the value of a currency is disguised, so far as internal speculation is concerned, by taking the form, in each individual case, of speculation for the fall or rise of particular commodities Very few persons grasp the idea of a rise and fall in the value of their own country's money, and the Money Market is a place where you deal in loans, not in money. We have not yet risen to the height of having a Currency Market in which we can buy and sell future Board of Trade, Statist and other Index Numbers But direct speculation in the currency of other countries is common enough, and is often ill-informed enough to cause great disturbances of values, instead of smoothing them down Soon after the war, the editor of an Athens journal was unable to go to a certain restaurant there because the waiters worried him with questions about the future of Austrian crowns which they were holding When the British troops first went to Cologne, they bought German marks because they saw that the mark was "lower than usual" It is known that many milliards of the depreciated currencies are held by foreigners Such holding is, of course, a pure addition to the usual demand for currency, and tends to maintain its value for a time Eventually, however, the foreign holders decide to sell, and their decision is much more likely to come at a time when it will make a fall more precipitous than when it will moderate a rise This ignorant speculation of foreigners has been the cause of many violent fluctuations of currency values and is a great support of the doctrine that they "depend on confidence." About that we need not say more than that the price of sugar also is affected at any moment by people's

views of what it will be in the future, but we do not say that "the price of sugar depends on confidence."

The supply being taken as fixed, *how much* will a given increase of demand send up the value of currency? The question is not so often asked as the corresponding question, "How much will any given addition to the supply raise prices?" because we do not feel ourselves able to measure additions to the demand as easily as additions to the supply. But one example seems workable. Suppose that to a country with a particular currency of its own there is added a new province one-tenth as large and with exactly similar characteristics, which has just, by some accident, lost all its own currency, and that the annexing country creates no additional currency, but allows the new province to supply itself as best it can. We may look on this as providing, after some initial disturbance, 10 per cent. of additional demand. The people in the new province, wanting a medium of exchange, would have to give people in the rest of the country commodities and services to induce them to part with some of their holdings of currency; these sales would send down the prices of commodities and services, and correspondingly elevate the value of the currency. There seems reason to believe that when things had settled down the rise in the value of the currency would correspond exactly with the increase of demand. If prices fall from eleven to ten, and £10 consequently buys as much as £11 did before, people will find it convenient to hold only £10 of currency when they held £11 before. So to induce the old part of the country to part with one-eleventh of its stock of currency, a reduction of prices by one-eleventh will be necessary and sufficient. This supports the doctrine that in the absence of anticipation of future change the elasticity of demand for money is "equal to unity."

§ 3. *Banks and Prices.*

Some writers contend that bankers control prices, forgetting apparently that prices existed and rose and fell for ages before there were any banks. It may therefore be well to recapitulate and emphasize the doctrine taught in Part I about the relation of banks and banking policy to prices.

Modern banking began to be important in this respect when people first found it convenient to hold bankers' notes for sums of money instead of gold and silver coins. The practice economized the metals, inasmuch as the bankers did not find it necessary to keep coin equal to more than a moderate fraction, perhaps a third at most, of their liability on their notes. So the invention and introduction of convertible banknotes tended to reduce the demand for the precious metals, to keep their value down, and consequently to keep general prices up. But the actual effect was small for a long time, because the demand for the metals was world-wide, while the area in which bank-notes was used was not large. Later, when the bank-note area grew in size and importance, the ability of banks to economize metal was very much restricted by legislation which insisted upon their keeping large holdings of metal against their notes. If the necessary holding approached closely to 100 per cent. the metal would not be economized at all, since the fact of being able to hold considerable sums in convenient paper encourages people to hold larger amounts of currency than if they could have nothing but coin. Legislatures have also sometimes prohibited the banks from issuing notes as small in denomination as the public would have been ready to accept and hold. In spite of these restrictions, however, the aggregate economy of metal arising from the use of convertible

bank-notes in the world at large was very considerable at the commencement of the twentieth century. Its importance in keeping down the value of gold can be appreciated if we try to estimate how much more gold would have been demanded if the United States, France, and a dozen other of the principal countries using large quantities of bank-notes had suppressed them.

But by that time another economy had been introduced which to a great extent took away the need for bank-notes as a substitute for gold. This was the cheque system, under which, instead of each of us encumbering ourselves with a stock of currency in the form of coin or bank-notes, we "put our money in the bank," and content ourselves with a small pocketful of currency replenished from time to time at the bank, knowing that we can make all large payments more conveniently by ordering the bank on a piece of paper to transfer some of what it owes us to the person whom we wish to pay The device does away with the necessity of an immense aggregate quantity of currency, since the banks do not need, in order to carry out their part in the arrangement, to hold nearly as much as their customers would have been obliged to do in the absence of the system. And the banks' liberty to hold as little as they find necessary has been less restricted by legislatures than their corresponding liberty in regard to bank-notes The economy of gold and consequent tendency to cheapen gold and raise prices is obvious, and certainly very great

We have, however, no means of estimating it. We may know that we keep an average of £10 a head in currency now, when we have banks, but we cannot possibly form the wildest guess how much we should keep if there were no banks Some of us would probably never have been born. the whole

situation of the world would be different. We must beware of any assumption that the amount of the economy is indicated by the magnitude of the aggregate of bank deposits Even if the aggregate of bank deposits excluded all double reckonings by which it may be swelled beyond the net amount due to persons who have credit balances, it would probably be greatly in excess of the amount which those persons would hold in currency if no banking facilities were available If the facility were not there, each of us would set about devising means for making our incomings coincide more nearly with our outgoings rather than keep in the house sums of currency as large as our present bank balances.

A still worse error, which has, unfortunately, been countenanced by many high monetary authorities in recent years, is to suppose that the aggregate of deposits is a kind of money (sometimes it is called "bank-money") which should be added to the actual stock of coin and notes existing at any moment. The individual, no doubt, finds "money in the bank" much the same as "cash in the house," but the aggregate of all the individuals' balances at their banks is only an amount which the bankers are liable to pay, but which they could not possibly pay in cash all at one moment A liability to pay cash is certainly not cash both debtors and creditors are painfully aware of the fact When additional currency is put on the market by some one who has the power of issuing it, prices are raised, because the issuer's offer of money in exchange for goods and services is *additional*, the power of nobody else to spend money having been reduced. When, on the other hand, a person increases his balance at his bank he increases the bank's power to lend only at most by the amount which he forgoes, so that the aggregate money-spending is not increased.

This is obvious when looked at from the side of those customers from whom the banks derive all their power to lend except what is derived from their own capital. The opposite view arises entirely from a curious belief that the power of the banks' creditors (i e. the depositors) to deposit is derived from the sums lent to the borrowers instead of the banks' power to lend being derived from the depositors Banks are thus supposed to make something out of nothing, and the only wonder is that they use their power with such extraordinary moderation

But whatever some bank chairmen and some monetary theorists may think, every bank-manager knows that the customers who provide the funds which the bank lends and invests are substantial people who have property of their own which they find convenient to entrust to the bank They could, if they had time and inclination, lend direct to the same people to whom the bank lends, but they find it better to entrust the business to an intermediary, the bank, which is expert at it and, by clubbing a number of them together as its customers, is able to let each of them have the money at any time when they happen to want it. The bank will pay them a little interest, or if not, will render many services gratuitously, including the service of keeping the sums deposited more safely than they could be kept in cash in the house.

A good proof of the nature of what underlies bank deposits is to be found in the death-duty returns If every one with any property died at the same moment these returns would give the aggregate property at that moment The amounts owed by individuals who had borrowed from banks would not be set against and cancel the "cash at bank" in the returns of the property of individuals who had lent to (deposited with) the banks death-duties are

payable on "cash at bank" They would be set against and cancel the value of property held by the debtors Thus if John Smith had £300 cash at bank and James Brown had borrowed £300 from the bank and bought sugar which has now become worth say £310, John Smith will be assessed for death-duty on £300 and James Brown on £10 The perfectly real thing underlying the figures in the bank books is the sugar, and though that was in the possession of Brown, this was only because Smith, through the bank, let Brown have the use of some of his "money," "capital" or "property," whichever phrase the reader prefers to use

The fact that the banks are employed as intermediaries makes no difference to the substance of the matter If all the individual mortgagees in the country called in the mortgages after due notice and, as the money came in, deposited it in banks which lent it out again on the same properties, the aggregate of bank deposits would be greatly raised, but does any one suppose that the "money" in the country would be increased and commodity prices raised? If all the Smiths had lent their three hundreds direct to Brown, bank deposits would have been less, but commodity prices would not have been less

"This is all very fine," some reader will say, "but surely it is true that banks control prices, since we know that putting up the bank rate checks rising prices" Such a reader will probably suppose (with many authorities who ought to know better) that the high bank rate acts by reducing the "bank-money" which they suppose deposits to consist of Certainly it tends to reduce borrowing from the banks, but it is accompanied by the offer of higher inducements to depositors to deposit or not remove their deposits If the object of a rise of bank-rate were to reduce deposits, it would be accompanied by

the announcement of a reduction of the rate allowed to depositors, instead of which it is always accompanied by the announcement of a rise in that rate. The object of the rise of bank rate is not to reduce deposits, *but to prevent advances growing faster than deposits* if it causes deposits to grow, so much the better. The discouragement to borrowing causes the borrowing class to diminish their expenditure and does not encourage the lending class (the depositors) to increase theirs, but rather to diminish it. The banks by this policy of encouraging the depositors and discouraging the borrowers very naturally tend to accumulate cash, which was just what they wanted. So, in consonance with the general theory of this book, there is an increased demand for currency, which tends to lower prices The banks take some currency off the market by "increasing their reserves," and, if we choose to put it in this way, we may say that they thereby, in so far, reduce the economy of currency effected by banking, an economy which becomes dangerous, and is therefore quite properly reduced, when the banks have lent or invested nearly 100 per cent. of what has been lent to them.

This power of taking currency off the market, however, is of a very limited kind and is not likely to be exercised to the full. The banks could not keep more than a very moderate fraction of their deposits in currency without sweeping away their profits and beginning to lose by their trade, and they are not likely to throw away their property in what would be in the long run a hopeless struggle to stabilize prices. What they may reasonably be expected to do is to discourage borrowing when it is going so far as to threaten their own security. This is a useful service to society as well as to themselves: it prevents the agonies of financial crises by checking the booms which precede them. But it is preventive

of those rises of prices which come from epidemics of optimism rather than of those more serious rises which come from excessive creations of currency, whether these arise from gold mines and minting or from the printing of notes to meet the exigencies of governments which do not care to meet their expenses honestly by means of taxes or even loans. The utmost possible increase of gold held against deposits by banks throughout the world would be a small matter compared with the present decennial output of the gold mines, while to ask the banks of a country, say for instance Germany in 1923, first to print notes to lend to the government and then to absorb in reserves an equal quantity would be simply ludicrous. The remedy for excessive issue of currency is not to be found in regulation of the rate of interest charged by and paid by certain intermediaries (the banks) between lenders and borrowers, but in regulation of the issue of the currency.

§ 4. *The effect of "Cover" on the value of paper currency.*

That banks which issue bits of paper promising to pay coin on demand should, and must to avoid bankruptcy, keep in hand whatever amount of coin is required to enable them to perform their promise is obvious. The amount necessary will vary enormously with the circumstances of the time and place, and to make any generalizations about it is made more difficult by the fact that banks of issue always (or almost always, for the Bank of England's Issue Department and the British Government's Currency Note Account might perhaps be reckoned as banks) accept deposits from customers. They undertake to repay these also on demand, and the coin kept in hand for that purpose is not and evidently cannot be separated from what is kept as "cover"

for the notes The only thing that is very certain is that if a bank's notes once get into circulation and remain in circulation for some years, the average cover required will be a very small percentage of the amount of notes outstanding, as the demand to exchange them for coin will always nearly equal the demands to exchange coin for them, and such discrepancies as occur will be known to be due at particular seasons, and therefore can be provided for shortly before they occur.

No one ever supposed that the proportion of such "cover" held against convertible notes directly affected their value Their value will be the same as that of the coin into which they are convertible, whether 1 per cent, 50 per cent or 100 per cent. are "covered," so long as conversion is believed to be obtainable if asked for. The effect of variation in the amount of cover on the value or purchasing power of money, is to be looked for only in its very trifling influence on the world demand for the metal of which the coin is made: the greater the cover held against notes the less is that metal economized.

Legislators have very commonly believed that bankers are apt to underestimate the amount of cover which it is necessary to hold in order to secure convertibility at all times, and they have also often thought that, even when convertibility is secured, bank-notes are likely to be issued at times in excess of what is desirable in the interest of stable prices and business They have therefore been inclined to make laws for the purpose of compelling bankers to keep more "cover" than they would do of their own volition. The more cover kept, the less profit on the issue of notes, so that such laws, when effective, tend to damp the otherwise natural desire of banks to issue as many notes as possible. In the extreme case, where 100 per cent. of cover must be kept

against all notes issued, all the profit of issue is taken away and where 100 per cent must be kept against all notes issued above a certain amount (as for instance under the Bank Charter Act, 1844, in England) all profit in issuing more than that amount is taken away In such cases, if notes, or at any rate more notes, are to be issued, some other inducement has to be offered

When an issue is inconvertible into free bullion and has in consequence of over-issue sunk below the bullion value it should represent, the inexpert are apt to imagine that the proportion of cover held against it does or should determine its value A Canadian Minister of State actually complained at a time when the Canadian paper was inconvertible because the dollar was worth less than the American dollar although, as he said, the cover held against the inconvertible paper Canadian dollar was a larger proportion of the issue than the cover held against the American convertible paper dollar. If the whole of the paper currency were about to be exchanged for the whole of the cover, there would be reason in this belief If, for example, in July, 1923, the 25,000 milliards of German currency had been exchangeable with the 650 million gold marks held against them, the value of a paper mark might have been taken to be one forty-thousandth of a gold mark, and if the three hundred millions of British Currency Notes had been exchangeable with the fifty millions of cover, the £1 Currency Note might reasonably have been taken to be worth one-sixth of a gold pound, though the £5 Bank of England note on the same principle would have been worth about six-sevenths of five gold pounds But nothing of the kind was expected, and when the cover is not going to be paid out how can it affect the value of the thing said to be covered? Buried in cellars, it might as

well be under the sea in the *Titanic*, or under the ground in the Transvaal.

Yet to such lengths of absurdity does the worship of "cover" go that cases have been known in which the issuers of inconvertible paper actually increased the issue in order to buy cover with the addition. Little over a century ago, for example, when the then inconvertible notes of the Bank of England were depreciated, the Bank issued more in order to buy gold. Since then there have been many instances in which return to a gold standard was delayed by the effort to accumulate cover, when what was really needed was a diminution of notes. Obviously if the issuer of a paper currency which has become depreciated sells notes and buys gold, he lowers the value of his notes by supplying more, and raises, though doubtless not so much, the value of gold by demanding more, and thus he widens the gap between the par value and the actual value of his currency. If he wants to raise the value of his notes, he should do just the opposite, sell any gold he has and buy—and burn—notes. If the government of this country had been really anxious and determined, in spite of all opposition, to raise the paper pound to par with the gold pound immediately, they could have done it very quickly some time before 1925 by applying a substantial but not overwhelming proportion of the gold held against the Currency and Bank Notes to the purchase and cancellation of notes.

While increase of cover has no tendency to raise the value of an inconvertible paper currency covered but rather the contrary, it is nevertheless true that the *requirement*, if enforced, of 100 per cent. cover for all further additions to the amount of the paper will maintain its value. There is nothing paradoxical in this. It happens simply because the requirement deprives the issuer of all motive to increase the issue

and substitutes a penalty if the issue is depreciated 60 per cent he will, to adapt a famous phrase, have to pay tenpence for fourpence. Of course, he will not do it, and consequently the increase of the currency is stopped and this maintains its value

§ 5 *"Scarcity of commodities" as a cause of high prices.*

During the war and afterwards, when a currency began to depreciate, it was often said that the cause of the rise of prices was a growing scarcity of commodities This was supposed to be an argument in favour of increasing the currency, though it is difficult to see how any sane person could believe that the fact that commodities had declined in quantity was a reason for making that decline greater in proportion to currency by increasing the quantity of currency. If there is a desire to keep prices stable, it would seem much more reasonable to *reduce* the currency when there is a decline in the quantity of commodities. If the value relationship between currency and other things is upset by a decline in the quantity of other things, it certainly will not be restored by increasing the quantity of currency.

But though the importance of changes in the amount of commodities available was obviously no argument for increasing currencies, it is worth while to ask whether in treating of the causes of the rise and fall of prices in general, we do not require to take more account of such changes than has been taken in the earlier part of this book

It may be argued that as the value of everything is reckoned by the quantity of other things for which it exchanges, the quantity available of all such things is just as important as the quantity of the thing itself. Iron or wheat, while remaining available in the same quantity as before, may rise in value because other

things have become more plentiful. Therefore, it will be suggested, in treating of currency and prices, we ought to think just as much about the quantity of commodities in general as about the quantity of currency.

The answer to this is that in fact no one thinks it necessary in the case of ordinary commodities to insist on the fact that their value depends on the absolute plentifulness of all other commodities as well as on their own absolute plentifulness The relationship between the quantities is the thing we have to consider, and it is both legitimate and convenient to treat of changes in this relationship as if they were always caused by changes in the quantity of the thing in question, ignoring the possibility of their being caused by changes in the quantity of all other things. It is legitimate, because it makes no difference to the argument whether the change in relationship is caused by change in the thing itself or in all the other things. It is convenient, because the change in all other things is almost always so slow as to be practically negligible over such period of time as we are likely to be interested in.

Currency is certainly no exception to the rule If its standard is a metallic one, this is obvious. There is no more reason for insisting on the quantity of all other things when we are dealing with gold or silver than when we are dealing with iron and tin.

If the standard is a paper unit, the variations in the quantity of all other things are likely to be even less comparatively important than when it is metallic

The "scarcity of commodities" during the war was mythical Production was really very large; what happened was that it was diverted into unusual channels. The production of a great many important articles fell off, but immense quantities of munitions of war were produced instead; many services were

dispensed with, while military services immensely increased. No doubt the old commodities counted for much more in the composition of index numbers of prices than the new commodities, and consequently the index numbers exaggerated the real rise of general prices But this forms merely one more example of the admitted difficulty of adapting index numbers of prices to changing circumstances

In the lassitude which immediately followed the war and the post-war boom, it is probable that there was some appreciable reduction of commodities in general, but it is quite certain that this was absolutely negligible compared with the enormous fluctuations in amounts of currency which took place Any abnormal scarcity of commodities which occurred was the merest trifle compared with the superfluity of currencies

Further, it may be pointed out that the neglect of changes in the quantity of "all other things" in the earlier part of this book is more apparent than real The two things which are likely to increase "all other things" are increase of industrious population and increase of produce *per capita* Increase of produce *per capita* is much the same as increased wealth, and both this and increase of population have been dealt with under demand for currency so far as appeared necessary.

PART III

THE RECENT HISTORICAL EXAMPLE

§ 1. *Gold Prices.*

For many years before the War all the great Western countries and, since 1898, India, reckoned prices in gold, and consequently had no reason for distinguishing gold prices from paper prices From the end of last century to the outbreak of the War a gradual rise of prices had been taking place because the demand for gold, though increasing, was not increasing fast enough to counteract completely the effect of the large annual additions to the stock which were being made in consequence chiefly of the discovery of the South African sources and their exploitation by the resources of modern science If the War had not occurred prices now would, so far as we can judge the probabilities of such a hypothesis, have been considerably higher than in 1913, though not so high as they actually are.

The War tended to diminish the value of gold, by enormously reducing the demand for it. Unlike most other important metals, gold is not used in the manufacture of munitions of war. Moreover, none or very little of it is used directly or indirectly in the provision of necessaries of life So belligerents in difficulties could afford to do without it, and as it is indestructible and contains much value in small bulk, it was a very convenient thing for them to give in exchange for things which they wanted more urgently. Accordingly they stopped buying (i.e.,

offering goods and services in exchange for) any of the new gold produced in the world from month to month, and, going further, they sent out a good deal of their old stock, both of currency and ornamental gold, into the neutral countries to buy munitions with it. Thus the people of the neutral countries were offered the whole of the world's annual output of gold and also a large amount of the old stock of the belligerent countries, and naturally they got it cheap, that is, they did not give as much goods and services for each ounce of it as it was worth before the War Soon even this market was much restricted, since many of the neutrals, following the fashion set by the belligerents, issued enough inconvertible paper money to make the import of gold for currency unprofitable

It is no wonder then that gold fell in value, nor that, as there has been no great reversal of policy, it remains so low that at the present date it may be said that it takes about three ounces of gold to buy what two would have bought before the War The wonder is rather that it is worth as much as it is. The explanation is to be found chiefly in two facts Firstly, the American Federal Reserve Board has hoarded a far larger amount of gold than anyone would have thought likely, and secondly, the low value of gold has had some considerable effect in diminishing the profitableness of the gold mines and eventually this reduced the output

§ 2 *Paper Prices*

A country which has the misfortune to be engaged in a war and is at all hard-pressed by the enemy acts quite reasonably when it parts with its gold in order to buy things of more immediate necessity from abroad In doing so it is only acting as any private individual with ordinary common sense does in

analogous circumstances There is, too, no mystery about the method by which the government can get possession of most of the gold in the country With the proceeds of taxes and loans it can buy up all that is not current coin, and the current coin can be extracted from the pockets and tills of the people by printing a convenient paper legal-tender substitute and making all payments in it, while retaining all coin received The coin which is in the cellars of banks can be commandeered, and the new paper given in exchange for it without causing any financial crisis or disturbance

This can be done without issuing more of the new currency than there existed of the old, and consequently the change from a gold to a paper unit of account—say from a gold pound or sovereign to a paper pound or Bradbury—need not involve any depreciation against either gold or commodities and services in general But the European belligerents in the late War, without a single exception, issued or allowed and encouraged their banks to issue a great deal more paper legal-tender than this It is well to understand exactly how and why this came about

Sometimes when peace is profound and currencies are perfectly healthy, something starts a general wave of optimism which makes large numbers of people buy and promise to buy more goods and services than usual under the impression that "business is likely to be good", in other words, that they will be able to sell more without reduction and perhaps with an increase of price There is a "boom," and the "producers" (it would be more accurate to say the community thinking of itself as a seller) feel very prosperous Soon, however, it is recognized that selling much at "good" prices is accompanied by having to buy at prices which are only "good" to the seller but are "shocking" to the buyer, while

buyers become more reluctant than usual to pay on the nail and sellers become more desirous of immediate receipts If either buyers or sellers were now given the power to print as much additional legal-tender paper money for their own use as they liked, no difficulty would be felt The sellers could then give the buyers unlimited credit or the buyers could pay the sellers at once As neither party has that power, they both, or rather some of each party, run to the banks for accommodation, i e to borrow, some buyers intending to pay at once with the borrowed money and some sellers intending to tide over the time till buyers who cannot pay at once are able to do so At this point again, all difficulty would be absent if the banks had the power of printing as much legal-tender inconvertible paper as they liked They would print, and as business would continue "good," they would be able to lend large quantities at a low rate without fear that the borrowers would be unable to repay Thus, whether the manufacture of the paper money was entrusted to the traders or the banks, the boom would go on until the currency became discredited by its excessive increase as described above p 70 As things are, where there is a currency limited in some way to an amount which can exist without loss of value, the demand for accommodation rises sharply, the banks see that they themselves will soon be in difficulties and unable to meet their obligations unless they choke off some of the would-be borrowers and encourage depositors They therefore raise the rate which they charge to borrowers and the rate which they pay to lenders (depositors), while at the same time they become stiffer about the security offered by borrowers The bubble then bursts The "producers" find that their prospects are not nearly so rosy as they supposed: their expenses have risen as well as their

receipts, and now that the wicked banks have "put on the screw," buyers are obliged to hold off, and they themselves, "though perfectly sound," owing to the impossibility of getting sufficient accommodation, have difficulty in carrying on their business on the scale to which it has risen. Pessimism succeeds optimism, and the upward slope of prices in which the predominant desire is to spend money on goods and services, is succeeded by a downward slope in which the predominant desire is to sell goods for money.

In a war the situation is different. It is then not private persons and institutions, but the government which starts the rise of prices by profuse undertakings to buy goods and services without much thought of how the expense is to be met. When the bills begin to come in, the revenue, augmented as yet, if at all, only by small additions, is quite inadequate to meet the additional payments. A private person or institution without realizable capital in analogous circumstances is obliged either to borrow, even if the terms be what he calls "ruinous," or to go into bankruptcy. Bankruptcy in such circumstances is clearly of no use to a government. a government has to continue in business. A government which appeared secure and was expected by its subjects to win the war, could probably always borrow as much as was needed, if it were willing to pay the necessary price, which would be a very high rate of interest at first, but one which could be reduced by reborrowing at lower rates after the war Governments, however, are afraid to offer good enough terms. They think it will encourage the enemy if they have to pay even only double what they had to pay for loans in time of peace The "business community," or so much of it as borrows from banks, terrifies it with stories that if it gives high interest the rates

charged to private borrowers will rise and a "deadly blow be struck at the industry of the country, which has to support the war" Economic intelligence is not sufficiently widespread to enable the government to reply that the industries serving the war directly, or, by the provision of necessaries, indirectly, will be able to pay, and that the more the others are closed down for the time the better

And the government can do what the private individuals and institutions could not do—it can print legal-tender inconvertible paper money for itself or borrow it from its creature, the State bank, which it authorizes to print and lend. This is what all the European belligerent governments did, some of them at once and others a little later, in the recent war In this country the direct method was preferred, the Treasury itself printing the Currency Notes (popularly known as "Treasury Notes"), though it issued them all except a small portion by way of sale to the Bank of England [1] In France the Bank of France was authorized to print the required notes, and they were lent to the government how little the nature of the transaction was understood is shown by the fact that the Bank of France was paid one per cent per annum for "lending" these notes to the government and actually got credit for generosity on the strength of it, though it is an outrageously

[1] The small part was lent to certain savings banks early in the War and has all been repaid The rest of the notes were given to the Bank of England in exchange for gold coin, bank notes, silver coin, and credits in the Bank's books These credits were from time to time taken from the Currency Notes Account to be "invested in" Ways and Means Advances and Treasury Bills, etc Thus put the amounts obtained at the command of the spending departments of the government, which proceeded to give cheques to persons whom they wished to pay These persons then were paid by the note issue just as much as if they had received the notes direct from the Treasury.

high commission for printing and maintaining such an issue, which is the proper description of what is done by the bank.

That the issue of inconvertible paper was a broken reed for governments to lean on was not then nor for a long time so well recognized as it is now. It was a quick way of getting power to spend—much quicker than taxes and quicker than loans. By pouring out money at the central market for loans, commonly called the Money-market, it kept the rate of interest down, and so appeared to enable the government to borrow on better terms. By raising prices all round it increased the amount of "money" saved by the people and therefore available to be borrowed by the government, and also increased the money yielded by income-taxes and *ad valorem* commodity taxes. Lastly, but not least important, it was supposed that if money incomes increased, the people would be less discontented with a diminished amount of material well-being, which seemed to them to come from high prices, than they would be with that diminished amount of material well-being if it seemed to come from diminution of spendable money income.

With the exception of the first, all these apparent advantages turned out delusive. True that some of the taxes and other revenues brought in more money, but they rose less rapidly than the expenses of administration and of working state institutions like the Post Office and railways: the countries in which the growth of currency went farthest eventually found that revenue was meeting but a miserably small percentage of their expenses. True that more money could be borrowed at first, but the larger amount only bought as much of the commodities and services required by the State as the smaller amount would have done if the currency had not

been increased, and eventually, when the continuous depreciation became recognized, it became impossible for the State to borrow at all. True that loans were raised at first at lower rates of interest, but if the depreciation was not to be permanent the lower rate was counterbalanced by the larger amount which had to be borrowed. True that to be pinched by high prices rather than by small money incomes and large taxes made the people rage in the first place against the persons who were supposed to profit and often did profit—most of them quite innocently—by the rise of prices instead of against the Government, but in the end the people came to the conclusion that the Government was in league with the hated "profiteers," and political discontent began to boil, and in some instances boiled over.

One advantage which was not foreseen or intended was obtained. As the currency fell in value the real burden of national debt contracted in that currency diminished. The pre-war debt of the Austrian government was reduced by the depreciation of the krone caused by the War to one-fourteen thousandth of its original gold value, and that of the German government to the incredibly small fraction of one billionth. In such cases bondholders are congratulated if they get a "compassionate allowance" of 5 or 10 p.c. Such a reduction of burden is a real advantage to the State in its corporate capacity, though we may agree with Adam Smith that the advantage is far more than counterbalanced by disadvantages to the community. To cover up its own real insolvency the State involves millions of private persons and institutions. Not only the State debts, but the debts of local authorities, companies, and individuals, are lightened to the debtors at the expense of their creditors; and not only debts but all other obligations to pay fixed sums of money, such as the rents

payable on long leases, preference and preferred ordinary dividends, pensions, and life annuities are virtually written down, the owners being cheated to benefit, not the Government or the country in general but the persons who have to pay these sums, and who for the most part had no desire to thus skulk out of their proper obligations. Under an avowed bankruptcy, as Adam Smith justly observes, even the State creditors would as a body be better off, since most of them hold, in addition to State obligations, rights to fixed sums payable by individuals and private institutions.

"In most countries the creditors of the public are, the greater part of them, wealthy people, who stand more in the relation of creditors than in that of debtors towards the rest of their fellow-citizens. A pretended payment of this kind, therefore, instead of alleviating, aggravates in most cases the loss of the creditors of the public; and without any advantage to the public, extends the calamity to a great number of other innocent people. It occasions a general and most pernicious subversion of the fortunes of private people, enriching in most cases the idle and profuse debtor at the expense of the industrious and frugal creditor, and transporting a great part of the national capital from the hands which were likely to increase and improve it, to those which are likely to dissipate and destroy it. When it becomes necessary for a state to declare itself bankrupt, in the same manner as when it becomes necessary for an individual to do so, a fair, open, and avowed bankruptcy is always the measure which is both least dishonourable to the debtor, and least hurtful to the creditor The honour of a state is surely very poorly provided for when, in order to cover the disgrace of a real bankruptcy, it has recourse to a juggling trick of this kind, so easily seen through,

and at the same time so extremely pernicious "[1]

In our own country the evil of an ever-increasing currency continued throughout 1919, though at a speed reduced to about half what it was during the latter part of the War, but at the end of the year a determination to stop the rot became manifest The Cunliffe Committee which was appointed in January, 1918, "to consider the various problems which will arise in connection with currency and the foreign exchanges" had made in August of that year (when the first edition of this book was being written) an interim report which favoured the retention in the future British currency system of the principle of the Bank Charter Act of 1844 that the paper currency should be limited by the requirement of 100 per cent. cover for all notes issued above a certain maximum, and recommended that after the completion of demobilization till the amount of that maximum could be definitely fixed, the actual highest amount reached in any one year should be the legal maximum for the next It rejected the suggestion "urged in some quarters that in order to make possible the provision of a liberal supply of money at low rates during the period of reconstruction further new currency notes should be created with the object of enabling banks to make large loans to industry without the risk of finding themselves short of cash to meet the requirements of the public for legal-tender money" After a year and a quarter of apparent somnolence this Committee awoke again to activity, and presented on December 3, 1919, a short Final Report of which the important part was the statement that "effect should now be given to the recommendation made in our Interim Report that the actual maximum fiduciary circulation in any

[1] *Wealth of Nations*, Bk. V, ch iii; in Ed. Cannan, vol ii, pp. 415-416

year should become the legal maximum for the following year." The Government, Mr Austen Chamberlain being Chancellor of the Exchequer, forthwith adopted the recommendation, and the Lords of the Treasury issued a scrap of paper which I will give in full, as it is one of the most important documents in the monetary history of the world.

"TREASURY MINUTE,

Dated the 15th December, 1919.

The Chancellor of the Exchequer draws the attention of the Board to paragraph 8 of the Final Report of the Committee on Currency and Foreign Exchanges after the War, which recommends the imposition of a maximum limit on the issue of Currency Notes under the Currency and Bank Notes Act, 1914 The Chancellor proposes to the Board that steps shall be taken to give effect to the recommendation that the actual maximum fiduciary circulation of Currency Notes in any year shall be the fixed maximum for the following year

The maximum fiduciary circulation during the expired portion of the current calendar year has been £320,608,298 10s and the Chancellor accordingly proposes that directions shall now be given to the Bank of England restricting them from issuing Currency Notes during the 12 months commencing the 1st January, 1920, in excess of a total of £320,600,000, except against gold or Bank of England Notes, and from issuing in the calendar year commencing 1st January in any year henceforward notes in excess of the actual maximum fiduciary circulation of the preceding 12 months.

My Lords concur.

Let copies of this Minute be transmitted to the Banks of England and Ireland, the Bankers' Clearing House Committee, and the Comptroller and Auditor-General and let copies be presented to both Houses of Parliament"

In estimating the importance of this document and of the Cunliffe Committee which inspired it, we must remember that the obligation of the Bank of England to keep 100 per cent cover against all notes issued above a certain fixed amount had taken on a new and much greater importance since convertibility into gold coin freely exportable and meltable had been taken away during the War Before the War, if the 100 per cent requirement had been abrogated, Bank Notes would still have been limited by the existence of convertibility to whatever amount could be kept in circulation without depreciation Convertibility being removed by the circumstances of the War and the regulations made under the Defence of the Realm Act, the requirement of 100 per cent. cover became the only limit So long as sovereigns or other gold came in to the Bank without any premium, the Bank Note issue did increase, but this source was drying up and certain to become negligible before long, and after that the Bank Note issue must become an amount incapable of appreciable increase until the depreciation of the paper against gold disappeared Thus the Cunliffe Committee had no need to trouble about Bank Notes

The scheme consequently put a limit on the whole paper currency The Government was not likely to buy gold at a premium to hold against additional Currency Notes (see above, p 88), and, as the amount of Bank Notes was fixed in the way just explained, to buy Bank Notes to hold against additional Currency Notes would only mean that the public would have

to give up one five-pound Bank Note for each five one-pound Currency Notes—a substitution of small denominations for large which would not affect the total currency in their hands at all.

The Treasury Minute, reviving memories of the 1797 "Restriction" Act, speaks of "restricting" the Bank of England from issuing notes above the maximum, as if the Bank was something more than the mere agent of the Treasury in the matter, but there is no getting over the fact that the Currency and Bank Notes Act, 1914, gives all power to the Treasury —"The Treasury may, subject to the provisions of this Act, issue Currency Notes for one pound and for ten shillings," and "Currency Notes may be issued to such persons and in such manner as the Treasury direct."[1] The Minute really amounted to a self-denying ordinance (very properly communicated to the Bank of England and the other banks) by which the Treasury bound itself to provide for all the future outgoings by other means than the issue of notes From very shortly after the beginning of the War down to December 1919, sales, known as "issues," of Currency Notes, had supplemented what was obtained from taxation, from borrowing from individuals and institutions such as the Bank of England and other banks at home and abroad, and from sales of war stores and other miscellaneous

[1] The remainder of Clause 2, of which these last words form the opening, runs, "but the amount of any notes issued to any person, shall, by virtue of this Act and without further registration or assurance, be a floating charge in priority to all other charges, whether under statute or otherwise, on the assets of that person" They suggest what is probably true, that the intention of the Act was only to provide loans in cash to individuals or banks in temporary financial difficulties owing to the War, and that the use which has been made of it is contrary to its spirit though not perhaps to its letter.

sources Some persons unversed in the art of public finance as now practised, which consists in overlaying simple facts with accounts which make them unintelligible, have been puzzled because they cannot find the three hundred millions raised by the issue of the fiduciary Currency Notes anywhere in the national accounts for the years 1914 to 1919 The explanation is that the Currency Note Account was treated as a "Government Department" able to lend money to the Exchequer So the millions which came in from the issue of notes, so far as they were not absorbed by the gold, bank-notes and silver coin which were stored away in cellars and appeared in the weekly account, were advanced to the Exchequer either simply as "Government Department Ways and Means Advances" (of which they formed a proportion so substantial that the Government always refused to disclose its amount) or by taking up Treasury Bills and other Government securities The receipt was thus effectually hidden away by being mixed indistinguishably with money borrowed in the ordinary way or derived from the Savings Banks and other public and semi-public institutions Henceforward the Treasury was to deny itself this resource (*See* Appendix I)

Our newspapers were fond of adjuring foreign governments which were inflicting increasing currency issues on their subjects to "balance their budgets" The advice is defective in form, since all budgets, like other accounts, balance, unless, which is unlikely, they contain an arithmetical error What is really wanted is that the budget, or rather the actual receipts and payments, should balance *without the receipts including anything from issues of paper money*, and this is what was undertaken by the Treasury when it issued the Minute of December 15, 1919

For a good many weeks the fruits of the undertaking

were not very visible. The Bank, no doubt from intelligent anticipation, had on November 6 raised the bank rate 1 per cent above the absurdly low rate of 5 per cent which had been maintained by the help of the output of new currency since April, 1917. But prices went on rising fast. As for the note issue, Christmas is the time of year at which people arrange to have most cash in their pockets. before Christmas it is drawn out of the banks in large quantities and they meet this drain by drawing from the Bank of England When the season is over the public has spent the money, and the extra notes trickle back as they are paid in to the banks by shopkeepers, entertainers and others. The banks deposit them with the Bank of England, which at that time paid Currency Notes in to the Currency Note Account, so that there was always a great drop in the amount of Currency Notes outstanding in the course of January. But when the seasonal drop was over, the prospect of the limit stopping the general slope upwards which had been going on for five years began to exercise the influence which the pre-war impossibility of getting unlimited sovereigns without paying full value for them had always exercised The banks, foreseeing tightness, became chary in making advances, and the Bank of England raised the Bank rate to 7 per cent in April. The banks did not, as some alleged at the time, "restrict credit" out of mere malice, nor from an unusual access of covetousness, nor out of a patriotic desire to end the rise of prices, but because they "hadn't got the money," and the reason why they had not got it, and did not expect to have it, was the adoption of the Cunliffe limit

Under this damping influence, the post-war boom, which was merely an extension and exaggeration of the war boom rather than an independent boom,

rapidly passed away and a great fall of prices began.

§ 3 *Restoration of the gold pound*

Following the spirit as well as the letter of the Cunliffe Report, the Treasury did not content itself with observing the limit laid down in the Minute, but so arranged its incomings from taxation, interest-bearing loans, and other sources that they exceeded its outgoings for current expenditure, redemption of debt, and other purposes. The result was that during the fiscal years April 1, 1920, to March 31, 1923 (or more exactly in the period between March 31, 1920, and March 28, 1923), it was able to burn £50,000,000 of Currency Notes besides adding to the reserve held against such notes £7,000,000 of silver coin withdrawn from circulation and £16,500,000 Bank of England Notes.[1]

But as it loves to do good by stealth, it made no parade of the fact that it was steadily redeeming non-interest-bearing debt in the shape of paper currency and substituting interest-bearing debt. Nobody could discover in the national accounts any record of the seventy-three millions spent in withdrawing currency, any more than they had been able to discover any entry of the three hundred millions received by issuing it. Just as the receipts had been disguised as money obtained by issuing Treasury Bills or by getting Advances from Government Departments, so were the expenses disguised as money spent in redeeming Treasury Bills and repaying

[1] It is true that in the same period the Bank of England Notes increased by £19 m., but this is not to be set off against the withdrawals mentioned in the text. It was entirely due to the fact that the other banks were persuaded to exchange their gold for bank-notes, and there seems no reason to believe that the notes left their vaults any more than the gold had done, while at the Bank of England the gold was simply stored away against the notes.

Advances from Government Departments, and few persons suspected that the Currency Note Account was the largest holder of Treasury Bills and the largest Advancer among Government Departments. Questions intended to bring out the facts were always smothered by Ministers in the House of Commons, and the uninstructed public imagined that the reduction of the aggregate currency by some fifteen per cent. was due to the fall of prices, just as they had supposed that the increase of currency from 1915 to 1919 was due to the rise of prices. This doubtless made it somewhat easier to carry out the policy, but it was unfortunate in that it prevented foreign countries from understanding what was done, and thus deprived them of what ought to have been a useful example.

By the end of the three years the work of restoring the pound to the old parity with gold was nearly done In March, 1920, the paper pound was only worth about 70 per cent. of the gold contents of a sovereign. in March, 1923, it was worth over 96 per cent.—four months more at that rate of progress should have brought it to par. But as often happens in monetary history, the cup was allowed to slip from the lip. The policy of reducing the paper currency was abandoned in favour of keeping it stationary (except of course for the seasonal and other temporary variations) It is as yet unknown whether this was due to a change of personnel which had taken place at the Treasury, to ministerial fears of unpopularity, to timidity on the part of high financial authorities about the return to the gold standard, or to a belief that gold and the paper pound would now approximate in value without any further reduction of the paper currency. Anyhow this belief turned out to be correct, though two more years were required for the process; after a shocking 8 per cent. relapse in the

latter part of 1923 and January, 1924, the pound and gold gradually approximated, until early in 1925 98½ per cent was reached

Inducement to shrink no longer from the final plunge was then furnished by the decision of South Africa to adopt the report of Professor Kemmerer and Mr Vissering and return to the gold standard on July 1 It was not to be expected that London could view with equanimity the prospect of continuing on a paper standard when a British Dominion with a mint of its own was using and reckoning in gold sovereigns

Accordingly Mr. Churchill, as Chancellor of the Exchequer, announced in his Budget speech at the end of April that the Treasury would henceforth allow the Bank of England complete freedom to export coin and bullion As it was understood that the Bank was willing to export if necessary, this at once destroyed the basis on which the paper standard rested (as explained on pp 53, 54) and restored the gold standard The pound once more became identical in value with a sovereign which could be freely exported. The subsequent legislation of 1925 (for which see the Appendix, p. 118) made no practical difference.

It is sometimes questioned whether if the Cunliffe Committee had foreseen the subsequent depression and unemployment, they would have made the recommendation they did. They must answer for themselves For my own part, I find in a memorandum advocating a speedy return to the pre-war gold standard which I circulated to some friends at the end of 1919 the following, "It is not contended that a restoration of the pound to its former gold value, or even a stoppage of its continued depreciation, can be attained without some temporary stringency in the money market and other inconveniences. But these inconveniences must be regarded in the same

light as those which a spendthrift or a drunkard is rightly exhorted by his friends to face like a man."

For the rake to stop his fatal progress and endeavour to lead a godly, righteous, and sober life is painful, but when he is at length succeeding, he should not turn round and belabour those who set him on the right road, but rather turn his indignation on those who before led him wrong, and now would like to get him back on the wrong road.

At any rate we may congratulate ourselves that our people have been much better off than those of the countries which continued much longer on the wrong road Some of them have been unemployed, but starvation and other forms of extreme suffering are to be met with among them far less than in countries where the wages of workmen doubled—in paper money—every few weeks They are more contented, and their government is solvent

But why not, it is asked, have so arranged the limitation of currency as to stabilize prices at the level of April, 1920, instead of reducing them violently? Would not that have obviated the depression and unemployment and also avoided the injustice inherent in a fall of prices, which does not compensate the same people as those who suffered by the previous rise?

The answer is, firstly, that when prices have been rising steadily for five years business has come to be so based on the anticipation of a continuance of the rise, that the mere taking away of that anticipation must cause a slump Part of the height of prices is due to the expectation that presently they will be higher still, and if that expectation is taken away, present prices must fall Secondly, if the high level of prices has not been long attained, the same people who were injured by the rise will be compensated by the fall to such a large extent that a fall of prices

will on the whole be more just than a continuance of the high level reached Every one will admit this, if allowed to put his own interpretation on "long" The rise which reached its zenith in April, 1920, had for the most part taken place in a period which for my part I should not consider long, and the return from the heights of that date to gold level which was and is much above the pre-war level, seems to me a very tolerable compromise between the claims of those who would have been justly treated by a return to the pre-war level of prices and those who would have been justly treated by a maintenance of the top prices of 1920

But to advocate any particular level of prices is foreign to the purpose of this book, which is to explain how different levels—or slopes—are in fact attained and maintained.

APPENDIX I

CURRENCY NOTES AND THE EXCHEQUER

It is obvious that any person or institution exercising the power of issuing scraps of paper which pass as £1 will benefit to the extent of almost £1 for every scrap issued, except in so far as gold or other idle treasure is kept "against" or as "cover for" them

There are two simple ways by which a government issuing or allowing the issue of such scraps or "notes" can realize the benefit (1) It may issue them itself directly in payment for goods and services, or (2) it may allow a bank to issue them by way of loan to itself and others on such profitable terms as may be agreed between itself and the bank

Under the first of these plans the benefit to the national Exchequer appears in the simple form of a receipt from the issue of paper currency in the year of issue. and if in a subsequent year some of the paper was redeemed by the State, the expense of redemption would appear as payments for redemption of paper currency Under the second system the benefit from issue and loss from redemption will not appear directly in the Exchequer accounts as receipts from issue and expenses of redemption in the years in which they occur, but will have to be looked for in the relations between the bank and the government, and may be spread over many years. The compensation paid by the bank to the government usually takes the form (as in France) of advances to the State at no rate of interest (or at a very low rate supposed to be sufficient to cover only the expenses of issue), but it also takes many other forms (e g the annual amount paid by the Bank of England for the privilege of its fiduciary issue) When this system is adopted

redemption of paper currency is made difficult by the fact that when the arrangements with the bank were made, it was usually forgotten to provide that if the State repaid any of the advances, the issue was to be reduced *pari passu*. So if the government raises money from the public by borrowing or collecting taxes from them, and repays some of the advances made by the bank, the bank is apt to merely lend what the government has repaid to its other customers under the pretence that "commerce requires it" and not reduce the currency at all.

The plan of the British Currency Notes issue was intermediate between the two simple plans. The Currency and Bank Notes Act, 1914, and the subsequent arrangements of the Treasury set up a kind of bank, very like the Issue Department of the Bank of England, for the issue of £1 and 10s notes, but without any provision for "cover," and it called this bank "The Currency Note Account." The bank thus constituted proceeded to sell its notes to the Bank of England in much the same way as dealers in gold used to sell gold bullion to it. For £56,250,000 of notes the Account took Bank of England notes, and from these it got no advantage, as they were stored away as cover. (The Bank of England also got no advantage, because it was obliged to hold gold against these notes: it would really have been simpler if the Bank of England notes had been cancelled and the gold itself put in the Account instead.) With five and a half million more of the notes the Account acquired that nominal amount of silver coin, holding that too in store, and getting no advantage from it. The remainder, about £235,000,000 towards the end, was paid for by the Bank of England from time to time crediting the Account with that amount in the aggregate in its books (which it was able to do because it paid out the Currency notes to its customers, including the government itself). The Account in turn withdrew the sums credited and advanced them to the Exchequer at the market rate of interest. Up to this point there is no trace of benefit to the Exchequer except that it has found a new lender—it paid interest to this lender just as it

might to anyone else But the Account did not keep the interest permanently; from time to time it paid over to the Exchequer its large profits (the difference between the expense of printing and reprinting on the one side, and the interest received on the other)

Under this scheme both the receipts from issue and the expense of redemption were hidden, and thus perhaps made issue a little less attractive and certainly made redemption less repellent. We may well suspect that the redemption which occurred from 1920 to 1923 could not have been effected if the cost had appeared in the national accounts of those years. But financial mystification seldom pays in the long run.

APPENDIX II

THE GOLD STANDARD IN ENGLAND BEFORE THE WAR AND AFTER 1925

A country is on the gold standard when it uses a monetary unit of account which varies in value almost exactly with the value of gold bullion in the world market. The English monetary unit has for many centuries been the "pound," often called, to distinguish it from other pounds, the "pound sterling." Shillings and pence, also used in accounts, are merely names for the twentieth and the two-hundred-and-fortieth parts of a pound.

Before the war the currency of England and Wales consisted of bronze coins for a penny, halfpenny and farthing, silver coins for various sums from *3d.* to *5s.*, gold coins for £1 and 10*s.* called sovereigns and half-sovereigns, and lastly, Bank of England notes for £5, £10 and larger (always round) sums. There were also a few country bank-notes, but as these died out altogether before 1925 we may ignore them.

The bronze and silver coinages formed a purely "managed" currency. They were kept at par with the rest of the currency by the policy of the Mint, which was to coin as much as and not more than could circulate comfortably at the appropriate rate. Of course occasionally a withdrawal of such subsidiary coinage may be required by a fall in the demand for it, but since 1816, when the policy was first adopted in regard to silver, there had been no instance of a considerable decline in the demand for bronze or silver coins, so that the amount in circulation had been sufficiently regulated

by greater or less activity in coinage. The metal in the coins was always worth considerably less than their face value, so that there was never any danger of their being melted or exported for the sake of their metallic contents. No change has taken place in regard to this part of the currency except that the silver in the silver coins has been reduced from 92½ per cent. to 50 per cent., and that the Treasury has given actual proof of its willingness to withdraw silver coin when necessary.

Bank of England notes were printed promises by the Bank to pay sums of pounds on demand. Though legal tender for pounds when tendered by anyone else, they were not so when tendered by the Bank itself, so that holders of the notes could require the Bank to pay in gold coin (silver coin being legal tender only up to £2 and bronze only to 1s). This obviously made it impossible for the notes to be issued or to continue in circulation in larger total amount than was compatible with their maintaining a value equal to that of a sovereign for each pound expressed on their face. And the sovereigns, in turn, could not be issued and kept in circulation in larger aggregate amount than was compatible with their maintaining a value equal to that of 113 grains of fine gold, since, if they fell appreciably below that level of value, some of them would be melted or exported by holders who would see a profit in the transaction. A sovereign being worth less than 113 grains when passing as £1 would mean in the language of the bullion market that the price of gold was above £3 17s 10½d standard and £4 4s 11¼d fine, so that full-weight sovereigns would sell for use in the arts or for export for more than a pound each. Thus the aggregate currency of bank-notes and sovereigns was always kept in check by the convertibility of bank-notes into sovereigns and the convertibility of sovereigns into free gold bullion.

On the other hand the Bank of England notes could not be so deficient in total amount as to rise in value appreciably above the rate of 113 grains to the pound, because the Bank was bound by law to give notes in exchange for all gold bullion offered to it at £3 17s 9d per ounce standard. Thus bank-notes were always

forthcoming to an amount which kept their value down to par

The gold coin could not be so deficient in amount as to rise appreciably above the rate of 113 grains of fine gold because the obligation of the Bank just mentioned to give notes for bullion meant also that sovereigns could be obtained at that rate, since the notes could be presented at once and payment claimed in sovereigns. In practice of course the Bank gave neither notes nor sovereigns for gold bullion, but credited persons presenting bullion with pounds in its books, and allowed them to draw on these pounds as they chose It met their eventual demands or the demands of those to whom they transferred their claims either with additional notes issued against the gold brought in or with sovereigns coined out of it, thus in either case increasing the currency and tending to reduce its value Sellers of bullion might, if they liked, have taken their bullion direct to the Mint and had it turned into coin at the rate of £3 17s 10½d per ounce standard, but the delay deterred them, so that this right had fallen into desuetude and the Bank alone was in the habit of getting gold coined Thus the convertibility of bullion into notes not only "automatically" kept up the supply of notes, but also in practice "automatically" kept up the supply of gold coin so as to prevent it rising in value above the rate of 113 grains to £1

During the war the people gave up their gold coins in exchange for the Currency notes for £1 and 10s issued by the Treasury (often called at first "Bradburies" because signed by the Secretary of the Treasury, Sir John Bradbury), and the banks (other than the Bank of England) during the war and afterwards gave up their reserves of gold coin to the Bank of England and took bank-notes in exchange The bank-notes continued legally redeemable in gold coin at the bank, and the new Currency notes were so too, but this convertibility was rendered useless because it was from the first impossible to export gold and it was soon made unlawful either to melt or to export gold coin and even to export gold bullion Additional bank-notes were only issued

in exchange for additional gold, which sharply limited their amount But the Currency notes, until December, 1919, were issued without any limitation at all, so that unlimited depreciation was possible.

From April, 1925, the gold standard was restored. The Government ceased at once to exercise its power of preventing the export of gold, and the Act which gave it that power was allowed to expire at the end of the year. The Gold Standard Act, 1925, abolished the right of holders of gold bullion to have it coined into sovereigns by the Mint and the right of holders of Bank of England notes and Currency notes to demand sovereigns from the Bank, but left untouched the right of holders of gold bullion to demand Bank of England notes from the bank at £3 17s 9d. per standard ounce, and gave the holders of Bank of England notes and Currency notes the right to demand in exchange bars containing 400 oz. of fine gold at the rate of £3 17s 10½d per standard ounce

So far as standard is concerned, the difference between this system and that in force before the war is practically nil. The holders of gold bullion desirous of converting into pounds are in as good a position as before, since they always preferred the Bank's immediate £3 17s 9d. to the Mint's delayed £3 17s. 10½d: the holders of notes desirous of converting pounds into free gold bullion are in a very slightly better position than they were, as they can now legally demand the absolutely full weight of gold at £3 17s 10½d whereas formerly the bank could satisfy their demand with sovereigns and half-sovereigns which might be a little below that weight owing to abrasion within the legal limit The few holders of sovereigns and half-sovereigns, which remain legal tender, are in the same position as before the war, except that the right of melting the coin has not been restored, a matter of little practical importance even if the law were capable of enforcement against the very small jewellers and others who alone are likely to find it convenient to melt the very few gold coins likely to come into their possession

The object aimed at by the change was to prevent

the public being able to replace their stock of Currency notes by sovereigns and half-sovereigns. But there was no reason to believe that the public had any desire to do this. The experience of all civilized communities has gone to show that notes are preferred to gold coin even when issued in somewhat lower denominations than for ten shillings at present prices. It should be noted that as the sovereign and half-sovereign remain legal tender, there is nothing to prevent individuals and banks from importing those which are minted in South Africa and Australia and putting them into circulation if they see any advantage in doing so.

The Gold Standard Act, 1925, while putting on the Bank of England the obligation of giving gold bars in exchange for Currency Notes, did not take away from the Treasury, *alias* the Government of the day, the power of withdrawing the Minute which established the Cunliffe limit, and thus recovering its freedom to issue an unlimited amount of notes. This weak point was removed by what was called the "amalgamation of the note-issues" effected under the Currency and Bank Notes Act of 1928, which came into operation on November 22 of that year.

That Act repealed the provisions of the Currency and Bank Notes Act, 1914, which gave the Treasury the power to create the Currency Notes, and it provided that the Bank of England should redeem the existing outstanding issue by itself issuing £1 and 10*s* Bank Notes in exchange. To balance the liability thus taken over by the Bank, it prescribed that the Bank should receive the whole of the Bank Notes (£56,250,000) and silver coin (£5,250,000) held in the Currency Note Account, together with a portion of the government Securities held in the Account, sufficient (with the Bank Notes and silver coin) to make up a total equal to the amount of Currency Notes outstanding (£286,750,000). The Bank Notes transferred, which had been purely unnecessary and meaningless intermediaries between Currency Notes and the £56,250,000 of gold bullion held against them, were immediately cancelled, and this eliminated a double reckoning in the total of paper currency which had

always deceived most foreign observers The Act further provided that any surplus left in the Currency Note Account after these transfers to the Bank was to go to the Exchequer, thus winding up the whole account

This scheme of course involved the disappearance of the "Cunliffe limit," so far as its curious use of the maximum fiduciary issue of the previous year was concerned But the limit arrived at for 1928 is, so to speak, embalmed in the provision that the "fiduciary issue" (as the amount of Bank Notes of all denominations which need not be covered by gold is now officially as well as commonly called) shall be £260,000,000, since this sum was arrived at by adding the £245,000,000 permissible for 1928 under the Cunliffe limit to the old twenty million fiduciary issue of the Bank under the Act of 1844, and deducting five millions for notes expected to be thrown out of Ireland by the Free State's decision to have a paper currency of its own This £260,000,000 may be varied by the Treasury on the request of the Bank, but a variation so made, if in the upward direction, will not continue in force for more than two years without parliamentary sanction

The profits of the whole of the issue (notes for £5 and upwards, as well as for £1 and 10s) have to be accounted for by the Bank and paid to the Exchequer.

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